Annual
Report

20
22

DDSA

Danish
Data Science
Academy

Table of Contents

Growing Danish Data Science

Danish Data Science Academy grew wings in 2022, thriving to unfold the great potential. The first full year of DDSA was characterised by being a year with no previous experience to lean on for DDSA and a lot of initiatives to develop, most importantly staffing the secretariat and establish our full organisation.

We are now 75 people in the DDSA organisation, and I am very thankful for the amazing engagement, excitement, and tons of energy from the people in this big organisation. It is such a pleasure seeing DDSA unfold through this willingness to impact, co-create, and Growing Danish Data Science with each unique perspective and experiences. This is a cornerstone in achieving the DDSA mission – to support a national collaborative network of data science experts across universities, public institutions, and industries, and to inspire and train the next generation of data scientists through educational, interdisciplinary, and collaborative activities. Through interaction at the 19 board, panel, and committee meetings during 2022 – supplemented by many meetings in smaller

planning groups – DDSA has already made great achievements and paved the way for even more.

Some of our first achievements on this journey were the awarding of 10 talented young data scientists with a DDSA PhD Fellowship at our Grand Opening in June with 450 hybrid attendees. We had our first Pre-graduate Retreat with 60 participants, funded Visit and Travel Grants and launched our Mentoring Programme. More than 3,000 people have attended in 29 DDSA-funded events, we have reached 3,800+ followers on LinkedIn, and launched our community calendar and newsletter. We are especially proud of our flagship event 'Danish Data Science 2022', where 300 data scientists were gathered for our fully booked two-day conference at Hotel Legoland in November, with no less than 14 parallel sessions and 6 keynote speakers.

In all our activities, an important aspiration is to support diversity in the data science field, e.g., regarding fields of study, sectors, gender, and reach all parts of Denmark. Another important aspiration is to attract international talent to Denmark. This is important as DDSA aims to create an internationally competitive Danish data science eco-system by supporting and stimulating fruitful training, education, and collaborations that utilise the field's span, competencies, and opportunities for the benefit of society in a broad sense.

Finally, a special thanks to The Novo Nordisk Foundation and the Villum Foundation for making it all possible. The year 2023 starts very differently than 2022, as we now have a fully working organisation and many great experiences to lean on as we develop and further expands our portfolio. I look very much forward to diving into all the exciting tasks Growing Danish Data Science.

All the best,

Sofie
Managing Director

DDSA Main Achievements 2022

Scientific Excellence

- 10 PhD Fellowships
- 36 Travel grants
- 8 Visit grants
- Pre-graduate retreat (60 attendees)

Community Building

- DDSA Grand Opening (450 hybrid attendees)
- DDSA and P1 PhD retreat (20 attendees)
- Danish Data Science 2022 Conference (300 attendees) with 14 parallels sessions and 6 keynote speakers

Training & Education

- 21 Event grants for a total of 2,400 participants
- 10 Course grants for a total of 600 participants

Organisation

- Established organisation of 75 people
- Code of Conduct
- Conflict of Interest

Community Resources

- Mentoring Programme (30 pairs)
- Launch of DDSA Data Science Calendar
- Creation of DDSA Art work

Partnerships & Synergy

- Close collaboration and knowledge sharing with DDEA, DCA, P1, and DIREC
- Joint annual conference with P1 and DIREC
- Meetings with among others ADD, DDSC, DD, NAD, and HIDA

Visibility & Branding

- Launch of DDSA newsletter
- DDSA Awareness Tour to all Danish universities
- Creation of DDSA visual identity
- 3,800+ followers on LinkedIn
- 550+ followers on Twitter
- 10 PhD videos – 'What is data science?'

DDSA 2022 Highlights

Secretariat fully staffed

DDSA Grand Opening at Statens Museum for Kunst (450 hybrid attendees)

10 first DDSA PhD Fellowships awarded

All DDSA Committees and panels appointed

DDSA Awareness Tour to 8 Danish universities

Danish Data Science 2022 Conference at Hotel Legoland (300 attendees)

Feb

Apr

Jun

Aug

Oct

Dec

Jan

Mar

May

Jul

Sep

Nov

First open call for Small and Large Course and Event Grants

Open Call for Travel Grants and Visit Grants

Second open call for Large Course and Event Grants

Mentoring Programme kick-off (30 pairs)

Open Call launched for 10 PhD Fellowships 2023

Open Call launched for 6 Postdoc Fellowships 2023

Pre-graduate retreat (60 attendees)

Launch of DDSA Newsletter

Launch of Data Science Calendar at ddsa.dk

Registration open for Mentoring Programme spring 2023

Danish Data Science Academy at a Glance

Data science is a rapidly evolving field and is of crucial importance to the development of our society. This applies to everything from digitalisation and disease prevention to sustainable growth and business development.

In 2030, Denmark will lack up to 80,000 people with skills within AI.[1] Therefore, knowledge sharing and training of new generations of data science experts is vital.

Danish Data Science Academy (DDSA) aims to create a unique data science environment in Denmark which can compete internationally and attract talent. DDSA wants to unite corporate sector, public authorities, organisations, and the research sector, developing a world class Danish data science eco-system that enables excellent data science-driven research, training, and knowledge sharing.

To achieve this, DDSA is supporting and funding education, networking, and collaboration within Danish data science.

1 McKinsey and The Innovation Fund Denmark, 2019, 'An AI Nation?'. an-ai-nation-harnessing-the-opportunity-of-ai-in-denmark.pdf (innovationsfonden.dk)

DDSA's Vision

Denmark has a world-class data science research and education eco-system.

DDSA's Mission

- Create a collaborative national network that elevates and supports data science and enables excellent data science-driven research, teaching, training, networking, and knowledge sharing; and

- Train more skilled data scientists that will benefit both the public and private sectors in Denmark in the long term.

Principles

To secure a safe environment with high standards and transparency, DDSA has developed the following principles:

- Code of Conduct - DDSA expect everyone engaged in DDSA activities to contribute to a safe and inclusive environment. Organisers of DDSA supported events are therefore responsible for informing and promoting the DDSA Code of Conduct during the event, and for immediately notifying DDSA of any breach to it that has come to their attention.

- Conflict of Interest - DDSA is determined to maintain the highest standards of integrity, work ethics, and transparency across all its activities. To succeed in this, the work of all DDSA governing bodies, committees, employees, and grant holders is governed by a set of guidelines. The basic principles underlying the DDSA Guidelines for Conflict of Interest are that decisions shall be made in an unbiased way.

Funding

184.3 _{million DKK}

- The Novo Nordisk Foundation and VILLUM Foundation have generously awarded DKK 184.3 million to the establishment and operations of Danish Data Science Academy in 2021-2026.

- The Novo Nordisk Foundation grant is DKK 152.5 million and the VILLUM Foundation grant is DKK 31.8 million.

DDSA Mission and Key Objectives

Scientific Excellence

Build national research capacity and enable scientific excellence by awarding PhD and PostDoc fellowships.

Community Building

Create a collaborative data science community in Denmark that connects data scientists across institutions and sub-disciplines through activities and events.

Training & Education

Support training of the next generation of researchers by supporting development of new courses to supplement, strengthen, and broaden the portfolio at Danish universities.

Mission

- To create a collaborative national network that elevates and supports data science, and enables excellent data science-driven research, teaching, networking, and knowledge sharing.

- Train more skilled data scientists that will benefit both the public and private sectors in Denmark and long term.

Community Resources

Enhance knowledge sharing by acting as aggregator of national overviews of courses, events, shared resources, methods, etc.

Partnerships & Synergy

Act as a national network that is complementary to, and synergetic with, other initiatives. Be open towards other foundations.

Visibility & Branding

Improve visibility of data science as a scientific discipline by acting as a platform for communication and outreach about data science research, education, and societal impact

Organisation

A major focus in the first half of 2022 was appointing committees and panels, and to hire the remaining positions in the secretariat.

Secretariat

As of June 1st, the secretariat was fully staffed with six full-time employees in the office at Technical University of Denmark (DTU) in Lyngby. Additionally, two student helpers were hired in December, starting in January 2023.

The DDSA Secretariat as of January 1st, 2023:

Managing Director
Sofie Inari Castella

Service Designer
Marius Laurberg Cortsen

Fellowship & Grant Manager
Mette Specht Andersen

Communications Manager
Marie Louise Thorstensen

Scientific Events Manager
Sandra Franco Iborra

Student Assistant Communications
Rebecca Nørskov Jørgensen

Education & Grant Manager
Sniff Andersen Nexø

Student Assistant Data Science
Adrián Sousa-Poza

© Photos by Mikael Schlosser

Board, Committees, and Panels

In 2022, all committees and panels, which are pivotal to lift and expand on the visions and ambitions of DDSA, were appointed. An open nomination call was launched in December 2021 with deadline in January 2022. The width and caliber of the 120 incoming nominations for the committees and panels was impressive. In the selection process, the Board strived for a diversity of geographic and personal profiles, and to represent the plurality of data science.

To realise the vision and mission of DDSA, a multitude of meetings have been held in 2022, including:

- 5 Board meetings
- 4 Fellowship Evaluation Committee meetings
- 3 Education & Networking Committee meetings
- 2 Cross-Academy Collaboration meetings
- 2 National Advisory Panel meetings
- 2 Young Academy Panel meetings and multitude of organizing committee meetings
- 1 Joint BoD, NAP, IAP, ENC workshop

07
Members of the Board of Directors (BoD)

12
Members of the Fellowship Evaluation Committee (FEC)

12
Members of the Education & Networking Committee (ENC)

04
Members of the Cross-Academy Collaboration sub-Committee (CAC) (Sub-Committee of the ENC)

12
Members of the National Advisory Panel (NAP)

06
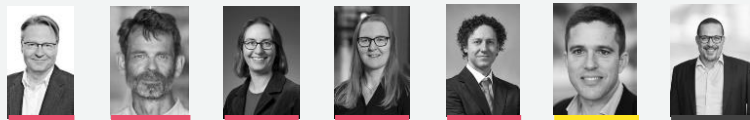Members of the International Advisory Panel (IAP)

15
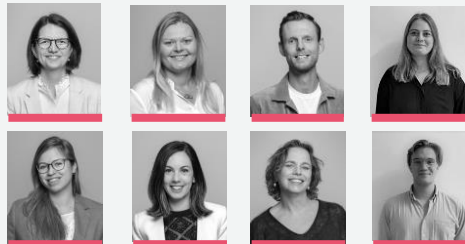Members of the Young Academy Panel (YAP)

Further details regarding the Board, committees, panels, and secretariat are available in the Appendix.
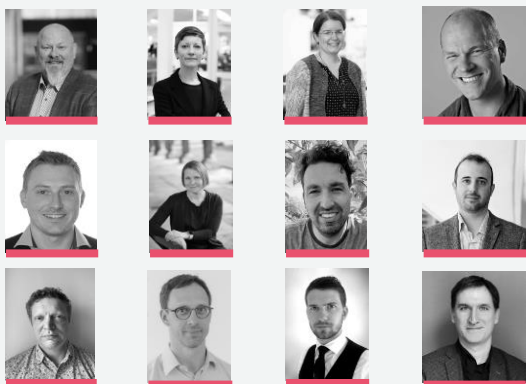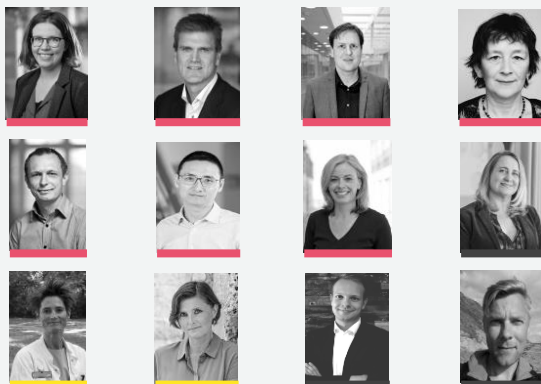
People of DDSA

Board of Directors

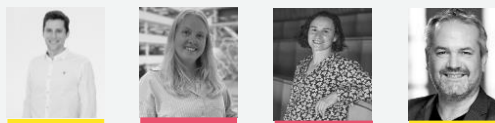**International Advisory Panel**

Secretariat

National Advisory Panel

Fellowship Evaluation Committee

Education & Networking Committee

Young Academy Panel

Cross-Academy Collaboration
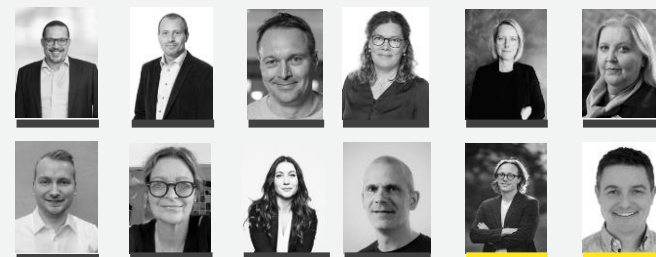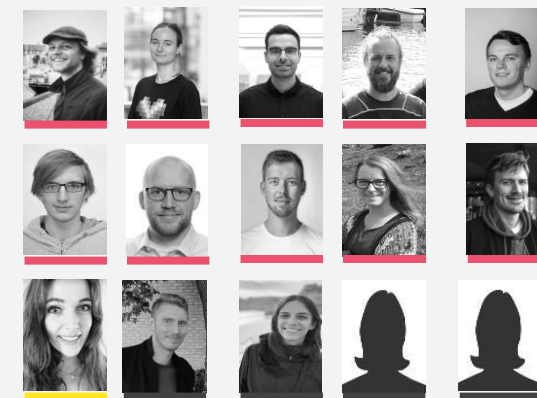
- University
- Public institution
- Private sector

DDSA spans the national landscape

University
Public institution
Private sector

© Denmark Map by Vemaps.com

And topped with 12 international research perspectives

University
Public institution
Private sector

Scientific
Excellence

Data science is a fast-changing field, and DDSA aims to engage and nurture the young researchers and future leaders who are driving this field. By focusing on academic freedom and the researcher-driven idea, DDSA strives to build capacity and engage and empower the new generation of talented data science researchers.
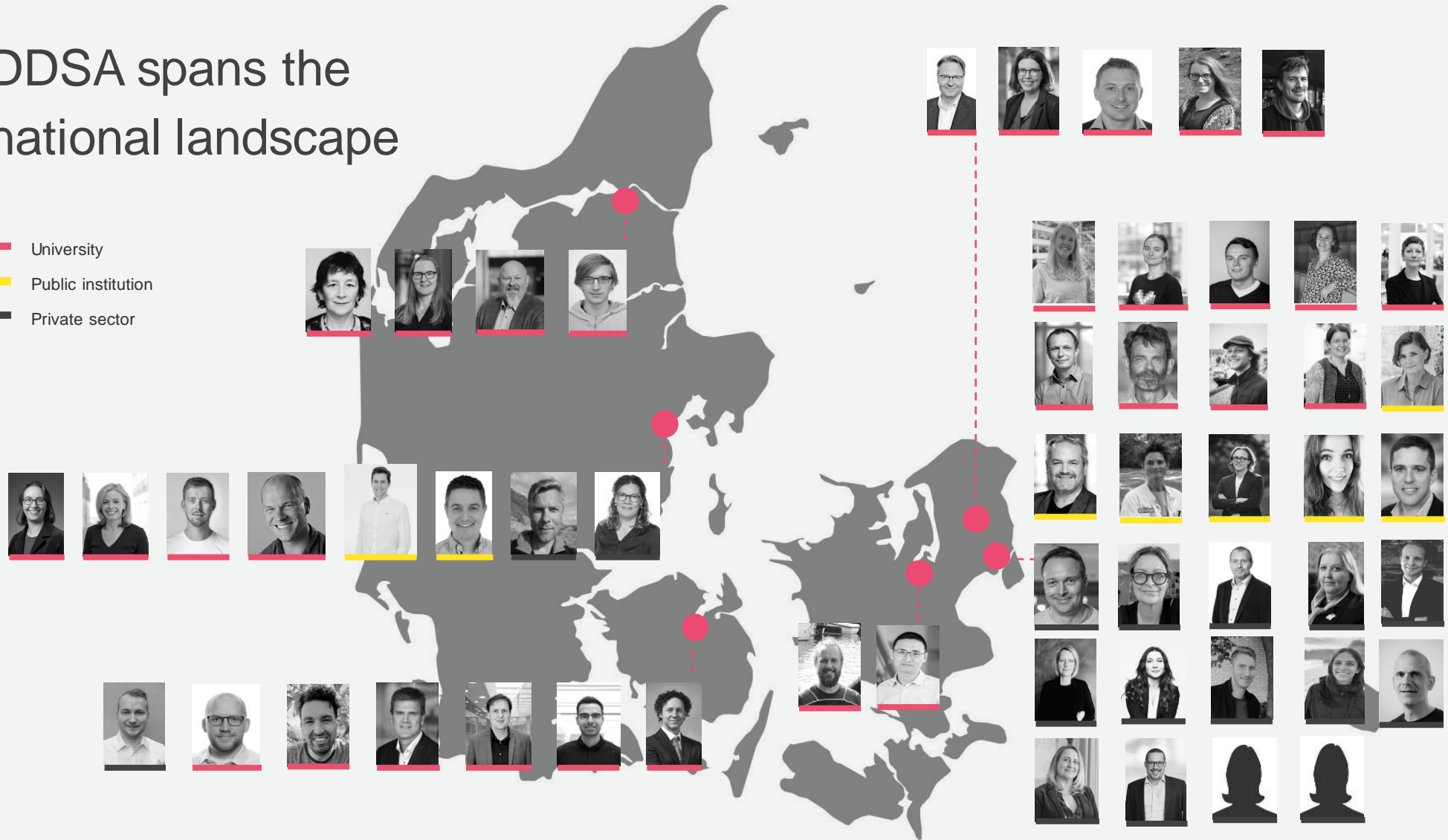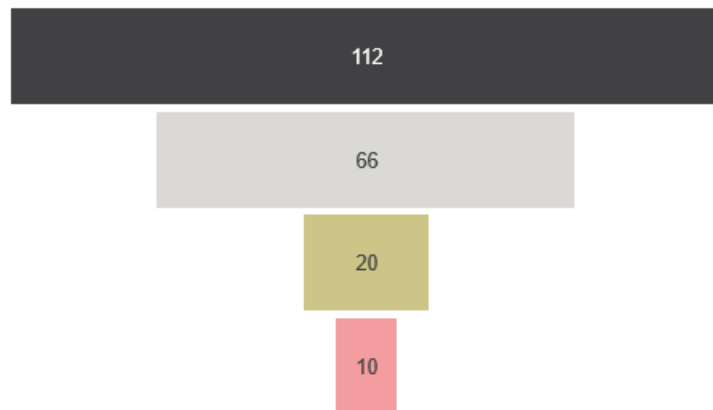
DDSA is awarding PhD and postdoctoral fellowships in open competition as well as supporting the mobility and development of young researchers by awarding visit and travel grants.

PhD applicants' success rate, 2022

Source: Danish Data Science Academy, 2022 n=112

- ■ Applications in total
- ▢ Met formal criteria
- ▢ Invited for interview
- ▢ Grant offered

DDSA PhD Fellowships

The first 10 DDSA PhD Fellowships of DKK 1.89 million were awarded at the DDSA Grand Opening at Statens Museum for Kunst in Copenhagen in June 2022.

The main objective of the DDSA PhD Fellowship Programme is to attract and educate excellent PhD students within data science, achieve scientific excellence and impact, while simultaneously extending the application of data science in relevant scientific domains. The scope of the programme enables visionary and ambitious young data scientists to pursue their own research ideas in collaboration with a Danish research environment in all fields of data science.

DDSA received 112 applications, of which 66 met the eligibility criteria. Of the 66 eligible applicants, 20 were invited for interviews, and 10 were awarded with a DDSA PhD Fellowship. The DDSA Fellowship Evaluation Committee assessed the applications based on the quality and impact of the proposed research, feasibility, applicant qualifications, collaboration, scope, and cross-disciplinarity. The chair and the international members of the Fellowship Evaluation Committee were

responsible for conducting the interviews and selecting the final 10 candidates. The selected candidates were finally processed and approved by the Board of Directors.
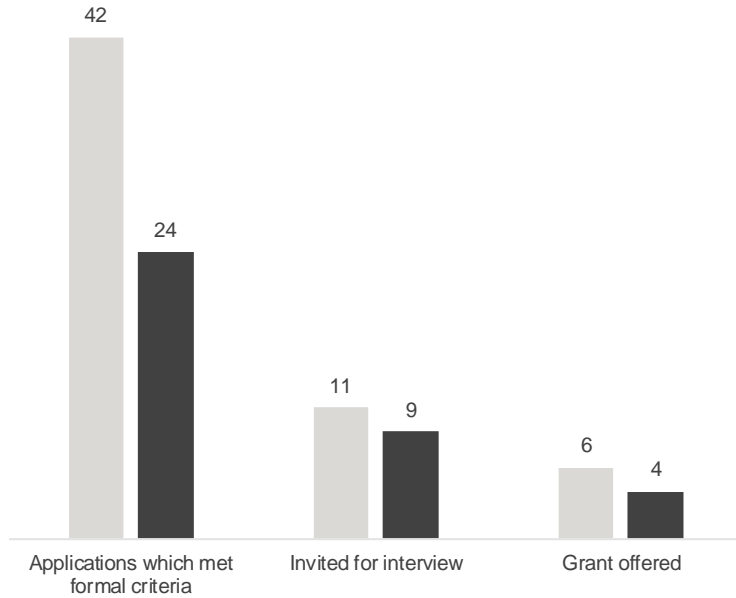
Applicants not meeting the eligibility criteria of the 2022 process failed to meet formal requirements of submitting project description, abstract, motivation letter, letter of support from a principal supervisor from a Danish research institution, as well as providing educational documentation of 300 ECTS points at the time of application. In order to reduce the number of applications not meeting the eligibility criteria in the 2023 process, DDSA is implementing a grant management system providing eligibility tests with short questionnaires, prior to commencement of an application, as well as mandatory application fields prior to submitting an application. Further, the 2023 call is open for the possibility of accepting candidates with preliminary master's degrees, and includes flexible PhD models, the so-called 3+5 and 4+4 models in order to attract the most promising candidates.

The open call for the DDSA PhD Fellowship 2023 was launched in October 2022, with the application deadline of March 19th, 2023.

PhD applicants by gender, 2022

Source: Danish Data Science Academy, 2022 n=66

- Male
- Female

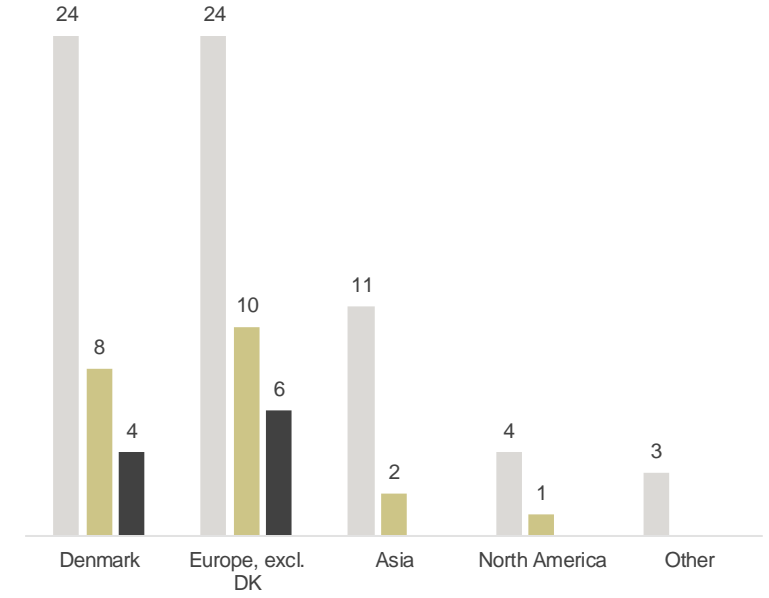|	Applications which met formal criteria	Invited for interview	Grant offered
Male	42	11	6
Female	24	9	4

Nationality of PhD applicants by region, 2022

Source: Danish Data Science Academy, 2022

- Applications which met formal criteria
- Invited for interview
- Grant offered

Note: 21 one were invited for an interview because one applicant dropped out. 'Other' represents one applicant from South America, Oceania, and Africa each. n=66
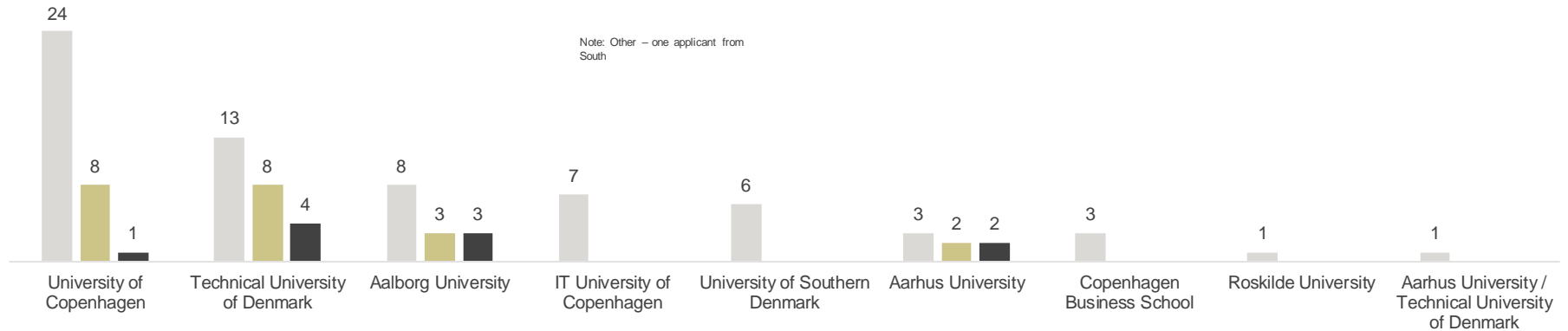

	Denmark	Europe, excl. DK	Asia	North America	Other
Applications which met formal criteria	24	24	11	4	3
Invited for interview	8	10	2	1	
Grant offered	4	6			

Note: Other – one applicant from South

PhD applicants by hosting institution, 2022

Source: Danish Data Science Academy, 2022 n=66

- Applications
- Invited for interview
- Grant offered

Note: 21 one were invited for an interview because one applicant dropped out.

	University of Copenhagen	Technical University of Denmark	Aalborg University	IT University of Copenhagen	University of Southern Denmark	Aarhus University	Copenhagen Business School	Roskilde University	Aarhus University / Technical University of Denmark
Applications	24	13	8	7	6	3	3		
Invited for interview	8	8	3			2		1	1
Grant offered	1	4	3			2			

DDSA PhD
Fellows 2022

Aarhus University

Amalie Brogaard Pauli

'Computational Rhetorical Analysis: Transfer Learning Methods for Detecting Persuasion in Text'

Technical University of Denmark

Emilie Wedenborg

'Discovering Polytopes in High Dimensional, Heterogeneous Datasets using Bayesian Archetypal Analysis'

Aalborg University

Ida Burchardt Egendal

'Mutational Signatures using Neural Networks for Robust Stratification of Cancer Patients'

Aalborg University

Gala Humblot-Renaux

' "Are You Sure?" Towards Trustworthy Computer Vision with Deep Multimodal Uncertainty Estimation'

Technical University of Denmark

Fabian Mager

'Using Transformer Models to Investigate Brain Structure, Neurodevelopment and Cognition'

Technical University of Denmark

Paul Jeha

'Itô's Formula as a Learnable Bridge between two SDEs'

Technical University of Denmark

Matteo Arnaudi

'Classification of Variants of Unknown Significance (VUS) Predisposing to Cancer'

University of Copenhagen

Richard Michael

'Principled Bayesian Optimization and Scientific ML for Protein Engineering'

Aalborg University

Rasmus Christensen

'Computational Design of Disordered Electrode Materials for Batteries'

Aarhus University

Peter Laszlo Juhasz

'Topological Data Analysis Based Models of Evolving Higher-Order Networks'

© Photo by Mikael Schlosser

DDSA PostDoc Fellowships

The first open call for six two-year DDSA Postdoc Fellowships of DKK 1.26 million opened in October 2022 with application deadline March 19th, 2023.

The DDSA Postdoc Fellowship is an individual research grant supporting excellent data scientists in the beginning of their research career to develop and consolidate their individual research identity and scientific network. The main objective of the DDSA Postdoc Fellowship Programme is to attract and educate excellent postdocs within data science, achieve scientific excellence and impact, while simultaneously extending the application of data science in relevant scientific domains.

DDSA encourages cross-disciplinary and collaborative projects. The interdisciplinary aspect is not limited to spanning theory and application but can also span different applications or different theoretical approaches.

Visit Grants

As part of the DDSA Fellowship Programme, DDSA provides funding for national and international bachelor's, master's and PhD students to spend time with new research groups within a data science research environment in Denmark.
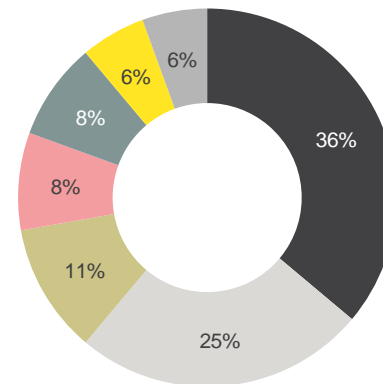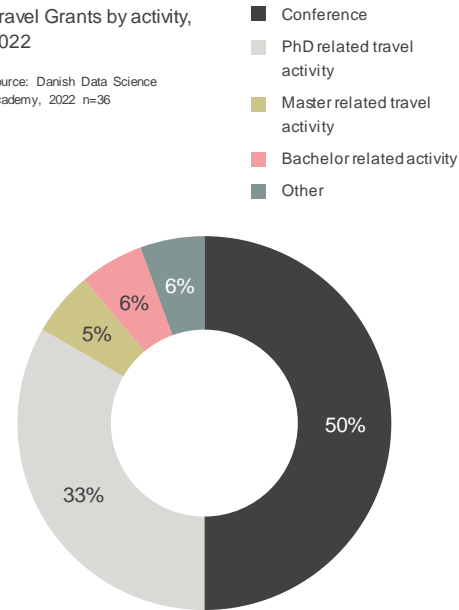
The purpose of the grant is to give students the opportunity to form the basis for a future DDSA Fellowship (PhD or postdoc) application in collaboration with a potential supervisor from a Danish university or research institution. The applications are assessed and granted by the secretariat within four weeks to support upcoming opportunities for the applicants. The chair of the Fellowship

Evaluation Committee may be consulted on specific applications. The grant contributes up to DKK 15,000. The call opened in August 2022 and is open for applications all year round.

DDSA received 8 applications for Visit Grants in 2022 and all applicants were awarded a grant. The grant-receivers were spread around Europe from Maastricht University and Universiteit van Amsterdam (both Netherlands), Saarland University (Germany), University of Rouen (France), Università degli studi di Torino and University of Catania (both Italy), and Duke University and The University of Alabama (both US).

Travel Grants by activity, 2022

Source: Danish Data Science Academy, 2022 n=36

- ■ Conference
- ■ PhD related travel activity
- ■ Master related travel activity
- ■ Bachelor related activity
- ■ Other

Travel Grants by university, 2022

Source: Danish Data Science Academy, 2022 n=66

- ■ Technical University of Denmark
- ■ University of Copenhagen
- ■ Aalborg University
- ■ Aarhus University
- ■ Copenhagen Business School
- ■ University of Southern Denmark
- ■ Other

Travel Grants

DDSA provides funding for students and young researchers based in Denmark to attend events outside of Denmark. The purpose of the Travel Grant is to enable students and researchers from bachelor to postdoc level to engage in activity within the international data science community or do research stays abroad.

The award is based on an evaluation of the application by the secretariat in consultation with the chair of the Fellowship Evaluation Committee. The grant contributes up to DKK 15,000, and the call opened in August 2022.

DDSA received 44 applications for a Travel Grant in 2022, hereof were 36 applicants awarded with a grant. The primary activities awarded with a Travel Grant were conference attendance and research stay as part of a PhD.

DDSA Pre-Graduate Retreat

October 2022

No less than 120 bachelor's and master's students within data science applied for a seat in the first annual DDSA Pre-graduate retreat on October 4-5th in Horsens. 60 talented data science students got a seat at this free of charge event.

A line-up of cutting-edge researchers, PhD students, professionals, and start-up leaders shared their experiences and answered questions from the participants. 11 speakers from different Danish universities and private companies, such as Novozymes and Universal Robots, set the stage for discussions of various topics ranging from career opportunities to doing a PhD, and how data science research can make a difference. The retreat also gave the participants the opportunity to meet other data science students and share their reflections and questions.

All Danish universities were represented with fields of study ranging from bioinformatics, over mathematical modelling and statistics to AI and data. The retreat was organised by the DDSA secretariat and an organising committee from the DDSA Young Academy Panel. The programme is available in the Appendix.

A 2023 Pre-Graduate Retreat is in planning.

Pre-graduate retreat, participants by gender, 2022

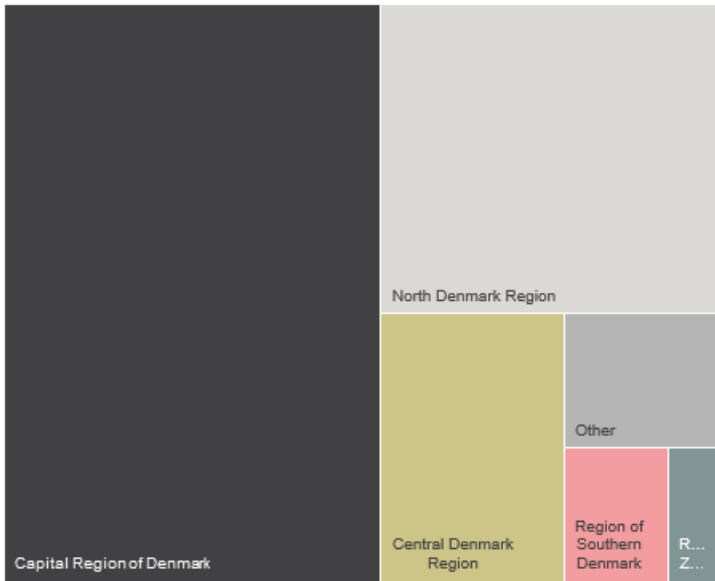Source: Danish Data Science Academy, 2022 n=59

■ Female
■ Male

16

43
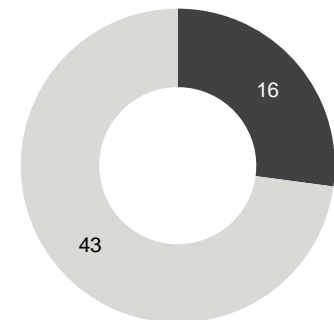
Pre-graduate retreat, participants by region, 2022

Source: Danish Data Science Academy, 2022 n=59

- ■ Capital Region of Denmark
- □ North Denmark Region
- ■ Central Denmark Region
- ■ Region of Southern Denmark
- ■ Region on Zealand
- ■ Other

Capital Region of Denmark

North Denmark Region

Central Denmark Region

Other

Region of Southern Denmark

R... Z...

Pre-graduate retreat, participant evaluation, 2022

Source: Danish Data Science Academy, 2022 n=59

- ■ To a very great extent
- □ To a large extent
- ■ To some extent
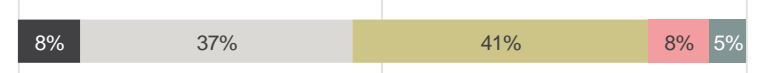- ■ To a lesser extent
- ■ To a very small extent

To what extend are you satisfied with the Pre-Graduate Retreat all in all? — 49% | 47% | 3%
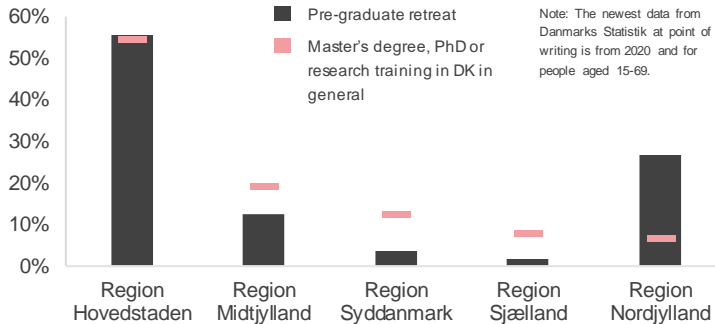
To what extend did you gain knowledge relevant to you? — 37% | 44% | 19%

To what extend did you form relationships/ grow your network during the Pre-Graduate Retreat? — 8% | 37% | 41% | 8% | 5%

Regional distribution of the participants at DDSA Pre-graduate Retreat 2022 compared to Danish residents with a Master's degree or higher education

Source: Danmarks Statistik (HFUDD16) and Danish Data Science Academy, 2022 n=56

- ■ Pre-graduate retreat
- ■ Master's degree, PhD or research training in DK in general

Note: The newest data from Danmarks Statistik at point of writing is from 2020 and for people aged 15-69.

60%
50%
40%
30%
20%
10%
0%

Region Hovedstaden | Region Midtjylland | Region Syddanmark | Region Sjælland | Region Nordjylland

Pre-graduate retreat, participants by university, 2022

Source: Danish Data Science Academy, 2022 n=59

- ■ Aalborg University
- □ Technical University of Denmark
- ■ University of Copenhagen
- ■ Aarhus University
- ■ IT University of Copenhagen
- ■ University of Southern Denmark
- ■ Copenhagen Business School
- □ Roskilde Univestity
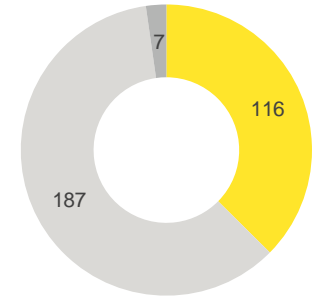- ■ Other

15 | 14 | 12 | 7 | 3 | 2 | 2 | 1 | 3
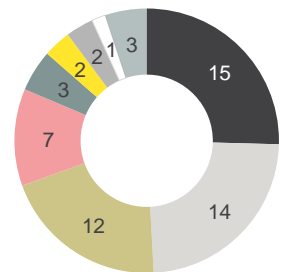
Community
Building

An important goal of DDSA is to strengthen and consolidate the Danish data science community that is currently fragmented across geography, disciplines, and institutions. This will be achieved through a portfolio of re-current and ad-hoc events.

DDSA Grand Opening
June 2022

DDSA Grand Opening, participants by gender, 2022

Source: Danish Data Science Academy, 2022 n=310

- Female
- Male
- Do not wish to answer / no answer

The official Grand Opening of DDSA took place on June 20th, 2022, at Statens Museum for Kunst, Copenhagen with 450 hybrid attendees. The invitation was open to the public and 68 people were on the waiting list for physical attendance.

As a part of the programme, the first 10 DDSA PhD Fellowships were revealed on stage along with a video produced for the occasion. The video presented the PhD Fellows' research projects within the field of data science, spanning from neuroscience over green transition to rhetorics and medical treatment.

Rasmus Larsen, Vice President at The Technical University of Denmark, welcomed the participants, followed by the foundations; Lene Oddershede, Senior Vice President at Novo Nordisk Foundation, Lars Hansen, CEO at VILLUM FONDEN, and Ulrik de Lichtenberg, Senior Scientific Manager at Novo Nordisk Foundation. Three keynote speakers gave their inspiring perspectives on

data science; Serge Belongie, Director and Professor at Pioneer Centre for AI, Lisbeth Knudsen, Strategic Director, Algoritmer, Data og Demokrati, Mandag Morgen and Altinget, and Cecilie Falkenstrøm, Artist & Founder of Artificial Mind. The programme is available in the Appendix.
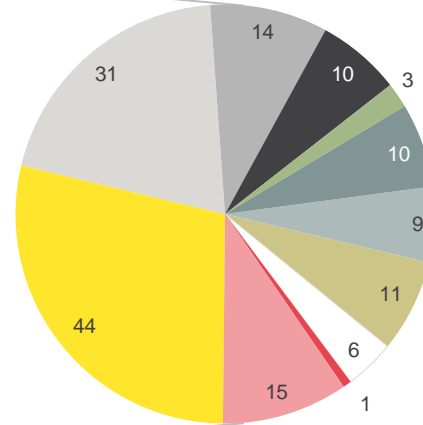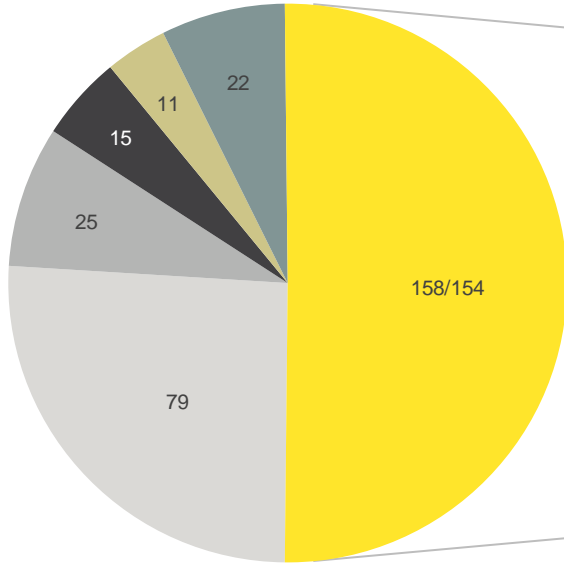
© Photos by Mikael Schlosser

© Photos by Mikael Schlosser

DDSA Grand Opening, participants by sector and university, 2022

Source: Danish Data Science Academy, 2022 n=310

- Academia
- Corporate
- Public Sector
- Foundations
- Start-up
- Other / no answer

158/154
79
25
15
11
22

31
14
10
3
10
9
11
6
1
15
44

- Technical University of Denmark
- University of Copenhagen
- Aalborg University
- IT University of Copenhagen
- Copenhagen Business School
- Aarhus University
- Roskilde University
- University of Southern Denmark
- Foreign Universities
- Business Academy Aarhus
- Other
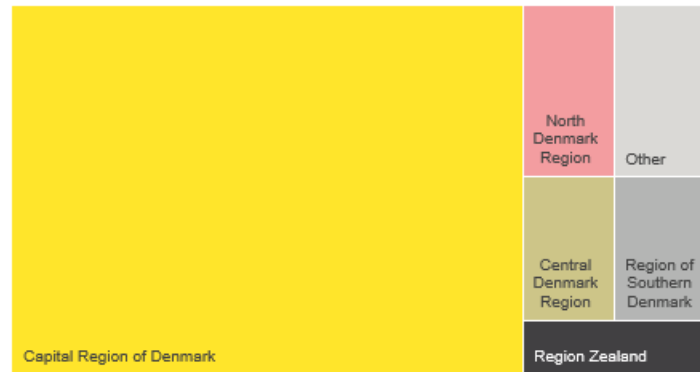
DDSA Grand Opening, participants by region, 2022

Source: Danish Data Science Academy, 2022 n=310

Capital Region of Denmark
North Denmark Region
Central Denmark Region
Region of Southern Denmark
Other
Region Zealand

- Capital Region of Denmark
- North Denmark Region
- Central Denmark Region
- Region of Southern Denmark
- Region on Zealand

DDSA Grand Opening, 'How long has data science been on your radar?', 2022

Source: Danish Data Science Academy, 2022 n=254

- < 1 year
- 1-5 years
- 5-10 years
- > 10 years

15
81
77
81

PhD Networking Retreat

October 2022

Danish Data Science 2022
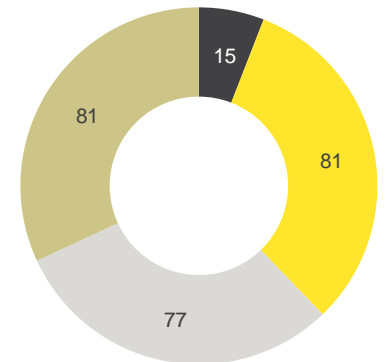
November 2022

In October, 17 new PhD fellows from the Pioneer Centre for AI and DDSA were gathered for a 24-hour networking retreat. The purpose of the retreat was to give the opportunity to build a community of peers and set the basis for future scientific collaborations, share ideas, and build solid social and professional networks, connecting the next generation of data scientists for a stronger Danish data science community. The event was free of charge for the participants and was co-organised and co-funded by DDSA and the Pioneer Centre for AI.

The programme is available in the Appendix.

The first DDSA Annual Conference took place on November 7-8th with 300 attendees. The event was fully booked with 50 people on the waiting list. Danish Data Science 2022 aimed at building relations across academia, start-ups, corporate, and public sector, facilitating detailed discussions and sessions on data science methods and applications with the goal of increasing collaboration across sectors, institutions, geographies, and sub-fields.

The two-day conference featured a broad range of technical sessions in the fields of machine learning, AI, data quality, algorithms, and much more.

Danish Data Science 2022 included 14 parallel sessions, more than 40 speakers, 46 poster presentations, and 6 keynote talks delivered by:
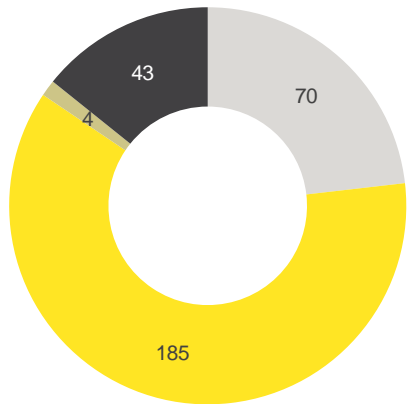
- 'Machine Learning for Healthcare: Opportunities, Current Solutions and Next Frontiers' by **Mihaela van der Schaar**, John Humphrey Plummer Professor of Machine Learning, AI and Medicine at the University of Cambridge

- 'Causality-Inspired ML: What can Causality do for ML?' by **Sara Magliacane**, Assistant Professor at University of Amsterdam & Research Scientist at MIT-IBM Watson AI Lab

- 'What do we do when our Work might Break Society?' by **Sune Lehmann**, Professor at DTU Compute

- 'From Probabilistic Modeling to Drug Discovery' by **Theofanis Karaletsos**, VP of Data Science/Machine Learning at Insitro

- 'Hyperproductive Machine Learning with Transformers and Hugging Face' by **Julien Simon**, Chief Evangelist at Hugging Face

- 'Welcoming Learners to Data Science with the Tidyverse' by **Mine Çetinkaya-Rundel**, Professor at Department of Statistical Science, Duke University

Danish Data Science 2022, participants by gender

Source: Danish Data Science Academy, 2022, n=302

Note: The category 'No answer' covers mostly that some attendants did not have the possibility to indicate their gender.

- 43
- 70
- 4
- 185

Female
Male
Do not wish to answer
No answer

To connect and nurture the Danish data science community, the conference hosted several networking activities, including a PhD dinner and a workshop with time to reflect on Growing Danish Data Science using Lego Serious Play. All in the inspiring and playful surroundings of Hotel Legoland in Billund.

The programme is available in the Appendix.

DDSA Danish Data Science 2022, participants by region, 2022

Source: Danish Data Science Academy, 2022 n=310

- Capital Region of Denmark
- North Denmark Region
- Central Denmark Region
- Region of Southern Denmark
- Region of Zealand
- Other countries

DDSA Data Science 2022, participants by sector and university

Source: Danish Data Science Academy, 2022 n=302

- Academia
- Corporate
- Public Sector
- Hospital / Academia
- Hospital
- Corporate / Academia
- Other
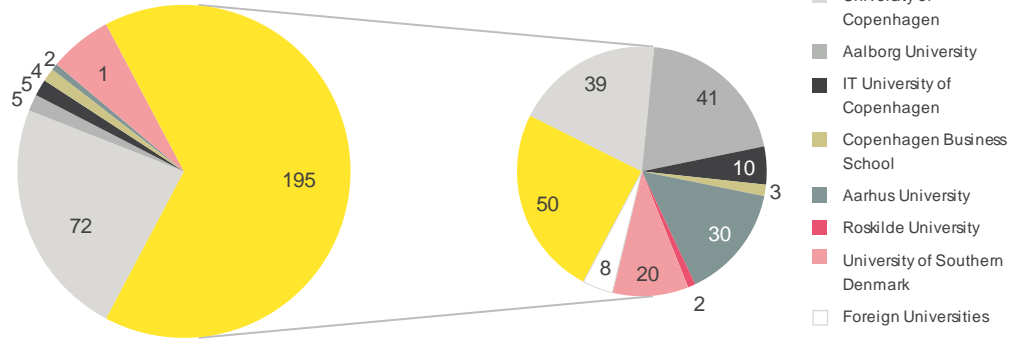
- Technical University of Denmark
- University of Copenhagen
- Aalborg University
- IT University of Copenhagen
- Copenhagen Business School
- Aarhus University
- Roskilde University
- University of Southern Denmark
- Foreign Universities

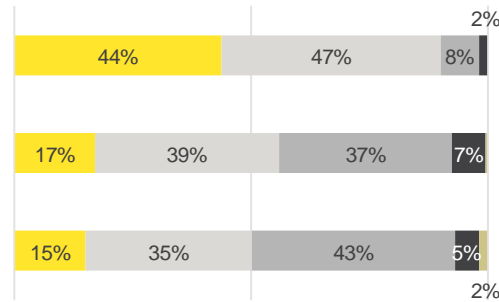## DDSA Danish Data Science 2022 retreat, participant evaluation, 2022

Source: Danish Data Science Academy, 2022 n=167

- To a very great extent
- To a large extent
- To some extent
- To a lesser extent
- To a very small extent

To what extend are you satisfied with the conference all in all? — 44% / 47% / 8% / 2%

To what extend did you gain knowledge relevant to you? — 17% / 39% / 37% / 7%

To what extend did you form relationships / grow your network during the conference? — 15% / 35% / 43% / 5% / 2%

Regional distribution of the participants at DDSA Danish Data Science 2022 compared to Danish residents with a Master's degree or higher education

- Pre-graduate retreat
- Master's degree, PhD or research training in DK in general

Source: Danmarks Statistik (HFUDD16) and Danish Data Science Academy, 2022 n=294 (DDS22)

Note: The newest data from Danmarks Statistik at point of writing is from 2020 and for people aged 15-69.

Community Building

DDSA Annual Report 2022
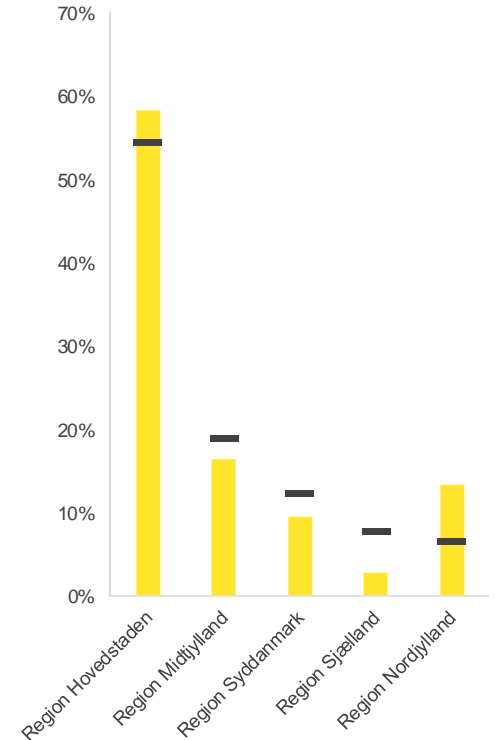
Annual Conference 2023

The planning of the 2023 Annual Conference already began in 2022 and will be organised in collaboration with Digital Research Centre Denmark (DIREC) and the Pioneer Centre for AI. The three organisations within data science, AI, digital technologies, and research are joining forces to strengthen knowledge sharing and collaboration across sectors and sub-fields.
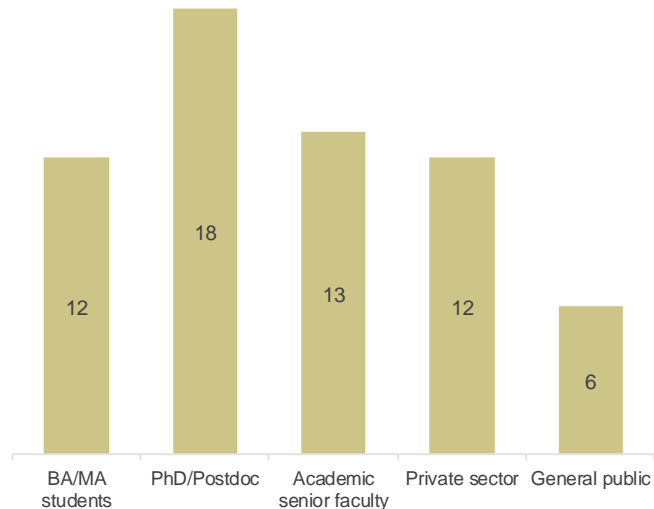
Training and
Education

DDSA aims to support a national collaborative network of data science experts across universities, public institutions, and industries, and to inspire and train the next generation of data scientists through educational, interdisciplinary, and collaborative activities. A great idea for a data science event or course can pave the way for a small or large DDSA Course and Event Grant.

———

Primary target groups for events and courses receiving DDSA small or large grants, 2022

Source: Danish Data Science Academy, 2022
n=61; 32 events and courses with the possibility of choosing more than one primary target group

	18			
12		13	12	
				6
BA/MA students	PhD/Postdoc	Academic senior faculty	Private sector	General public

Large Course and Event Grants

The first open call for large grants for data science courses and events was launched in February 2022 with deadline in March. The second call opened in August with deadline in September.

DDSA welcomes applications for two kinds of activities:

- Events and networking activities including, but not limited to, workshops, training/mentoring events, networking initiatives, competitions, and hackathons

- Courses including, but not limited to, university courses on PhD- and postdoc level, as well as vocational courses for public-, hospital-, and private sector employees

The event or course may have a total budget above DKK 100,000, of which DDSA can fund up to DKK 100,000.

14 applications were submitted, and 11 applicants received a large grant in 2022. The DDSA Education & Networking Committee evaluates the large grant applications, and their recommendation is sent to the Board for approval. A list of large grant receivers is available in the Appendix.

The third call opened in December 2022 with deadline in February 2023.

Small Course and Event Grants

The open call for small grants for data science courses and events that will contribute to growing Danish data science was launched in February 2022 and is open all year round.

Small course and event grants can support the same kind of activities as large grants but must have a total budget below DKK 100,000. It is possible to get funding up to DKK 50,000.

21 applications were submitted, and 19 applicants received a small grant in 2022. The applications are processed by the secretariat within four weeks.

A list of small grant receivers is available in the Appendix.

Examples on DDSA funded events

Course and Event Funding

The DDSA course funding in 2022 included summer schools and PhD/integrated courses with the expectation of more than 500 participants, spanning a variety of subjects within machine learning, recommender systems, missing data, MLOps, topological data analysis, and much more.

The 2022 event funding spanned from the Danish Championship in AI for students over student cafés to a variety of workshops, symposiums, hackathons, large Danish and international conferences as well as after work meet-ups in the industry. The DDSA-funded events in 2022 are expected to reach more than 3,000 participants in 2022 and 2023.

Women in Data Science Copenhagen 2022

Summer School on Privacy-Preserving Machine Learning

International Workshop on Re-Using Robot Data

Winter School on Recommender Systems

Machine Learning Operations Summer School

Responsible Machine Learning for Healthcare Workshop

Dansk Selskab for Kemometri Hackathon

Young Data Science Talents at Digital Tech Summit

Young Researcher Entrepreneurship Academy

DDSC Founding General Meeting

Community
Resources

DDSA aims to enhance knowledge sharing on a national scale, and will continuously develop new services to the community, e.g., via national aggregation of knowledge about the Danish data science landscape and to support personal growth and professional development for talented young data scientists. This has resulted in a number of initiatives, which will be expanded and supplemented in the years to come.

Mentoring Programme

Bridging experience and talent within Danish data science is at the core of the DDSA Mentoring Programme. The Pilot Programme was launched in September 2022 and is running until February 2023. The Pilot Programme was limited to participants of the DDSA Pre-graduate retreat to ensure a manageable crowd. All mentees were bachelor's or master's students. The programme obtained great outreach success as 42 mentors and 30 mentees registered via an open call. In total, 30 pairs of experienced
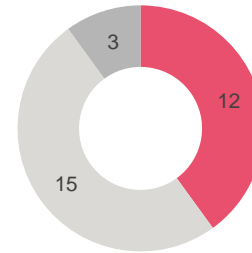
mentors and talented mentees were matched. At the midway feedback, 67 pct. were satisfied to a very great or large extent (n=24).

The Mentoring Programme Spring 2023 Edition opened for registration in December 2022 and is open to everyone. Kick-off is in March 2023, and the programme will run until July 2023. From here, the mentoring programmes will follow the academic calendar in a year-long format to ensure more interaction.

Mentors by sector, 2022

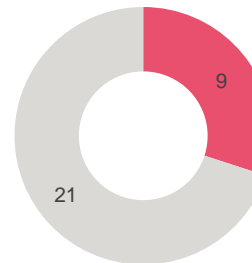Source: Danish Data Science Academy, 2022, n=30

- University
- Corporate
- University and Hospital

Mentees by university, 2022

Source: Danish Data Science Academy, 2022, n=30

- Technical University
- University of Copenhagen
- Aalborg University
- IT University of Copenhagen
- Copenhagen Business School
- Aarhus University
- Roskilde University
- Other

Mentors by gender, 2022

Source: Danish Data Science Academy, 2022, n=30
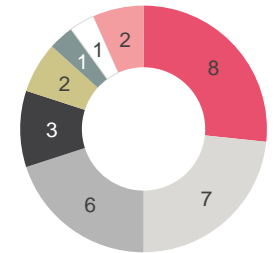
- Female
- Male

Mentees by gender, 2022
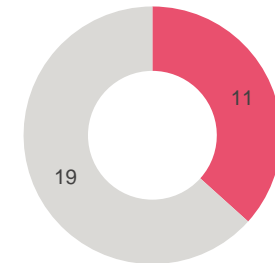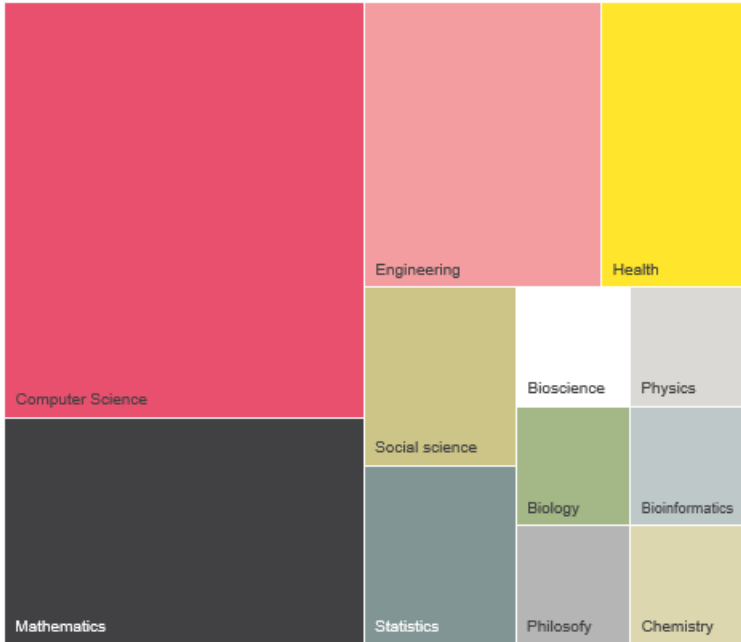
Source: Danish Data Science Academy, 2022, n=30

- Female
- Male

Mentors by field of study, 2022

Source: Danish Data Science Academy, 2022
n=35; some of the 30 mentees mentioned more than one field of study.

- Computer Science
- Mathematics
- Engineering
- Health
- Social Science
- Statistics
- Bioscience
- Biology
- Philosophy
- Physics
- Bioinformatics
- Chemistry

Mentees by field of study, 2022

Source: Danish Data Science Academy, 2022
n=35; some of the 30 mentors mentioned more than one field of study.

- Engineering
- Computer Science
- Statistics
- Bioinformatics
- Data Science
- Health
- Social Science
- AI and Data Science
- IT and Cognition
- Business Data Science
- Environmental Science

Mentors by region, 2022

Note: 'Other' is covering University of Oxford and an unspecified Danish university
Source: Danish Data Science Academy, 2022 n=30

Mentees by region, 2022

Source: Danish Data Science Academy, 2022
n=35; some of the 30 mentors mentioned more than one field of study.

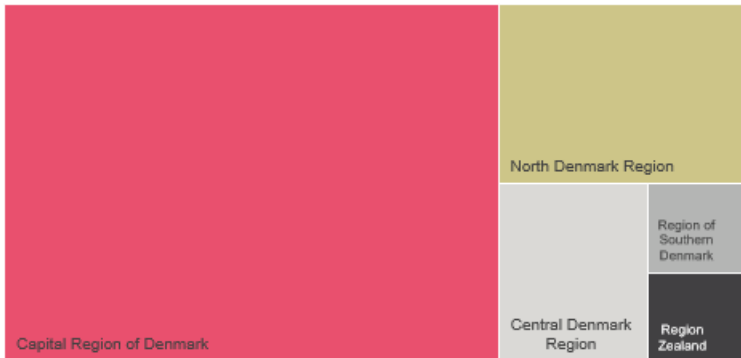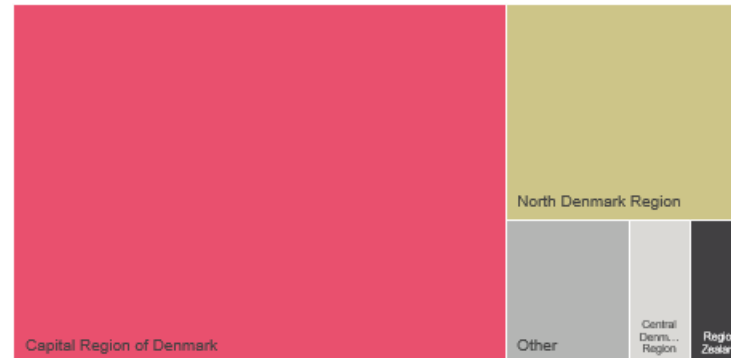## Danish Data Science Calendar

DDSA has built a community calendar at ddsa.dk with the aim of creating the go-to calendar within Danish data science with inspiring events, courses, deadlines, networking activities, etc. The development of the calendar is an ongoing task, and DDSA continuously encourages the community to help create the calendar by submitting their own data science activities. Among the calendar features are:

- Community Events – enables users of the calendar to submit their own events

- Event aggregator – allows the calendar to aggregate events from 3rd party calendars

- Filter bar – enabling users to find events that are relevant to them

- Event mode – allows the calendar to highlight if the events are virtual, physical or hybrid, and integrate with online meeting tools

Community Co-Creation

In the autumn 2022, 10 qualitative interviews were conducted by DDSA within the Danish data science eco-system. The purpose was to identify needs for growing the Danish data science community. The process was based on design thinking and service design methods. The interviews were semi-structured, and the interviewees were selected based on their affiliated organisation type (public, NGO, private), organisation size (small, medium, large), and interviewee seniority (young professional, mid-level, experienced). Additionally, interviewees were selected through pyramid-search and self-selection.

The needs identified in the interviews were synthesised into six themes and 24 insights. This was brought to the Danish Data Science 2022 conference, where 50 participants took part in the Community Co-Creation Installation and voted on their most relatable insights and 'how-might-we' questions. The research has been used to inform formats and content of DDSA-organised events, as well as to shape the development of community resources.

Visualising the Data Science Community in Denmark

Through a collaboration with tech-artist Cecilie Falkenstrøm, an interactive digital art project has been created. The art piece illustrates, how data via machine learning and natural language processing can be converted into a digital work of art. Having been trained upon a dataset of discursive articulations by people within Danish data science, the AI creates its own unique machine-generated visual manifestations.

The work uses the latest image generating diffusion model to visualise the field of participants at DDSA events over the course of the five-year grant period and is therefore an artwork in progress. Participants are represented as nodes in a graph structure, connecting people based on semantical similarities from work descriptions. Combined, this gives a visual way of exploring the complicated network of people and their interests within the field of data science. The first edition was presented at Danish Data Science 2022.

Visibility
and Branding

The primary priorities in the communication effort in 2022 have been to create the DDSA visual identity, strengthen the social media presence, develop ddsa.dk, and create the newsletter DDSAnews.

Visual Identity

In developing the DDSA visual identity, the focus has been on creating a visual identity with the ability to speak to student talent as well as stakeholders from the academic, public, and private sector.

The DDSA visual identity needs to convey a focus on excellence but also requires an inspiring and innovative feel to it in order to stand out from the crowd and attract the curious minds of top talent. This has resulted in five brand attributes which the visual identity should express: Excellent, Inviting, Innovative, Inspiring, and Impactful.

At the same time, the abstract character of data science offers a great opportunity to create something impactful and versatile. This notion has been visualised with a pattern library with 10 abstract patterns which speak of flow and transformation. Combined with fonts and a simple but bold colour palette, the visual language allows DDSA to speak in a wide range of different voices.

ddsa.dk

The DDSA website, ddsa.dk, was established in the summer of 2021 with very limited information. In the wake of the development of the DDSA visual identity, ddsa.dk has had a makeover aligning the website to the visual identity. The site has been expanded with more information ongoingly to ensure relevant information about calls, activities, and events. In 2023 a major update and relaunch of the website is planned to ensure a professional, up-to-date, user-friendly, and inviting website.

In the end of 2022, a Danish data science calendar was launched at ddsa.dk with the aim of becoming the go-to calendar for the Danish data science community.

Social Media

In 2022 a main focus of the DDSA communication effort has been on strengthening the presence on social media when communicating about activities, funding, etc. During recent years, social media have changed the way especially students and early-career researchers communicate. The use of digital platforms such as LinkedIn and Twitter have enabled easy and rapid dissemination of data science news and activities to reach young data scientists to a much wider audience across sectors and to the public. This priority is also reflected in the minor focus on e.g., media coverage in 2022.

LinkedIn and Twitter are the primary communication channels for DDSA besides ddsa.dk. On average there are close to two weekly DDSA updates on both SoMe platforms. The updates include, but are not limited to, open calls for funding opportunities, activities, events, deadlines, DDSAnews, cooperation with other organisations, event updates, recruitment, video-stories, storytelling 'What is Data Science?, and more. #GrowingDanishDataScience is used in most of the posts.

Danish Data Science… · 30.09.2022
Three strong partners within #AI, #digital #technologies, #datascience and #research - @DataScienceDK with our good friends at DIREC and @AiCentreDK - are hosting our first shared national annual conference in 2023. Read more

bit.ly/3rlYsDM
#GrowingDanishDataScience

Sofie Castella og 2 andre
1   24

Danish Data Science… · 15.08.2022
What is #DataScience?Meet DDSA #PhD Fellow Richard Michael from @DIKU_Institut 👇 In his PhD, Richard proposes a novel #MachineLearning method which can reduce required experimental time and resources through better computational protein variant proposals #GrowingDanishDataScience
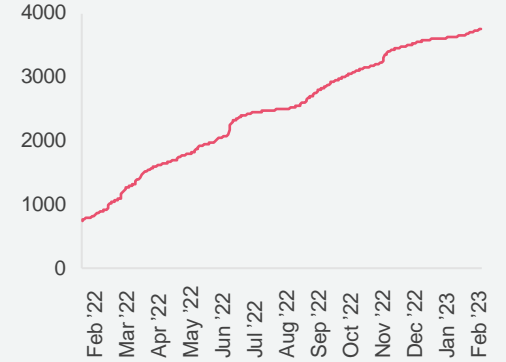
Richard Michael

430 visninger
6   12

in

DDSA has had a LinkedIn profile since November 2021 counting 3,800+ followers. Over the last year, DDSA has published 82 posts on LinkedIn, generating more than 230,000 impressions, 26,000 clicks and 3,600 likes.[5]

DDSA LinkedIn followers, 2022

Source: LinkedIn, February 6th, 2023

Note: LinkedIn followers in the period of February 6th, 2022, to February 5th, 2023.

2 In the period available in LinkedIn statistics from February 7th, 2022, to February 6th, 2023.
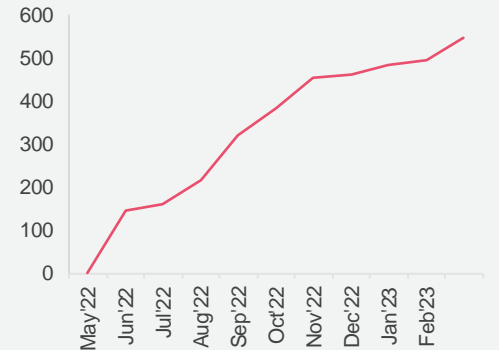
🐦

DDSA has had a Twitter profile since June 2022 counting 550+ followers. Since June 2022, DDSA has published 63 tweets on the Twitter-profile @DataScienceDK, generating more than 85,000 impressions, and 175 mentions.[6]

DDSA Twitter followers, 2022

Source: Twitter, February 6th, 2023

Note: Twitter followers in the period from creating a Twitter profile on June 19th, 2022, to February 7th, 2023.

3 Twitter statistics from June 20th, 2022, to February 7th, 2023.

PhD Video

As a part of the celebration of the 10 DDSA PhD fellows 2022 at DDSA Grand Opening, a video with the 10 PhD fellows was presented. The video gives a short presentation of the 10 PhD fellows and the scope of their PhD. Furthermore, 10 individual videos were created, which are being used as teasers for the next PhD Fellowship call, and as a part of the 'What is Data Science?'-campaign on social media, ddsa.dk, and DDSAnews.

The videos are available at ddsa.dk.

An important focus in DDSA communication activities has been on strengthening the social media presence. This priority is reflected in the minor focus on e.g., media coverage in 2022.

Leading op to the large events, the Grand Opening of DDSA in June and Danish Data Science 2022 in November, press material has been developed, and sent to a selected list of journalists. The press material is also available at ddsa.dk, and the press releases were published on social media as well.

Newsletter

In December 2022, DDSA launched the first issue of the newsletter DDSAnews. In developing DDSAnews, focus has been on creating a newsletter in accordance with the DDSA brand attributes.

The goal has been to create a newsletter with cut to the chase news stories, focus on upcoming events and funding deadlines, and a video centered around the theme 'What is Data Science?'. Another important focal point has been to resource-optimise and create a

newsletter which is quite fast and easy to implement, e.g., without a lot of time-consuming picture-handling. The expected frequency for DDSAnews is 4-6 times per year, but this is still under assessment.

A sign-up form has been created at ddsa.dk as well as a box on the frontpage and a short 'Sign Up. Be Inspired' social media-campaign. The campaign started in mid-december, and by end January 2023 there were 285 subscribers of DDSAnews.

Communication Network

In the second part of 2022, an effort has been made to build a communications network, especially with universities and relevant organisations. This has resulted in an increase in mentions and shared posts on social media by departments and organisations, as well as different news and deadlines has been shared at relevant organisations' and university websites.

Awareness Tour

In September, the Managing Director visited all Danish universities[7] in the 'DDSA Awareness Tour 2022'. The purpose was to create networks and raise awareness about DDSA and the possibilities for funding, events, etc., among both students and faculties.

4 Aalborg University, Aarhus University, University of Southern Denmark, Roskilde University, IT University of Copenhagen, Copenhagen Business School, University of Copenhagen, and Technical University of Denmark.

Partnerships
and Synergy

DDSA has created strong collaborative ties with several organisations.

Danish Diabetes and Endocrine Academy (DDEA) and Danish Cardiovascular Academy (DCA)

DDSA has strong ties with the two sister organisations in the Novo Nordisk Foundation (NNF) family. This includes three joint course activities, and +30 meetings:

- 'Data Science Spring School' by DDEA and DDSA

- 'Sex Differences in Metabolic and Cardiovascular Disease' course by DCA, supported by DDSA

- Joint course for the three academy secretariats on learning activities

- Cross-academy knowledge sharing event, incl. NNF presentations

- Cross-academy meeting with board members, executive management, and NNF

- Cross-academy meeting with board chairpersons and executive management

- Cross-academy managing directors collaboration meetings every two weeks

- And a multitude of ad hoc collaboratory topic specific meetings across the academies, e.g., regarding mentoring programme

Pioneer Centre for AI (P1) and Digital Research Centre Denmark (DIREC)

DDSA is collaborating and knowledge sharing with P1 and DIREC, and the three organisations have agreed on joining forces for all annual conferences going forward. DDSA and P1 also held a joint PhD retreat for newly appointed PhD students from both organisations.

Other Collaboration Partners

DDSA has had collaboration meetings with:

- Algoritmer, Data & Demokrati (ADD)

- Danish Data Science Community (DDSC)

- Neuroscience Academy Denmark (NAD)

- Helmholz Information & Data Science Academy (HIDA – a German sister organisation)

Future Focus

Looking into 2023, we are thrilled about our upcoming activities which include, but is not limited to, awarding the first 6 DDSA Postdoc Fellows and another 10 young DDSA PhD Fellows at a celebration event in Aalborg in June. We will continue working towards growing the Danish data science community, with a particular focus on young researchers. We will provide a number of travel and visit grants as well as course and event grants relevant for Danish data science, offer another Pre-graduate retreat and create both a spring and an autumn edition of the Mentoring Programme. We are also looking into a year with a major update and relaunch of ddsa.dk, to ensure a professional, up-to-date, user-friendly, and inviting website.

We are also looking forward to joining forces with Pioneer Centre for AI and Digital Research Centre Denmark at our first shared national conference, with the goal of an annual recurring event. One of the strategic objectives of DDSA is to support network creation and knowledge sharing across data science in Denmark. With this joint meetup, we are creating a space for knowledge sharing across sub-fields and sectors within Danish research and development, thereby creating an essential framework towards establishing Denmark as a strong international player on data science, digital technologies, and AI. Settling the venue and dates has proved to be quite a difficult task due to the size of the event. NEURIPS unfortunately took our planned slot, so we have been forced to reschedule and postpone the event till February 1-2, 2024.

As far as the organisation is concerned, the Young Academy Panel (YAP) will already go through a new nomination process in 2023.

The nomination deadline will be in September, with appointment of the new YAP from January 2024. All other governing bodies will have a new nomination process in 2024 and re-appointment is possible.

The day after the Danish Data Science 2022 conference, the Board and some of the panels and committees took part in a day to reflect on the strategic direction of DDSA for the coming years using Lego Serious Play. The outcome was nine concrete proposals for new initiatives, which the Board will discuss and prioritise, adding more exciting initiatives to our future portfolio.

The year 2023 starts very differently than 2022 with a complete and very engaged organisation, and a lot of experiences to lean on in unfolding the full potential of DDSA Growing Danish Data Science.

Appendix

Table of Contents

Appendix

Project Milestones and Deliverables

The milestones and deliverables in the table are taken from 'Application for a Danish Data Science Academy', February 10, 2021. The table reflects the deliverables as of December 31, 2022.

	Completed
	In progress
	Cancelled

Start-Up Milestones (2021)
DDSA initiation (start of grant period)
First BoD meeting
Planning of annual 2021 meeting initiated (scaled down version, virtual)
Managing Director hired
All members of the committees appointed (FEC and ENC)
Secretariat members hired
All members of the advisory panels appointed
Website established
First call for community input (ideas, events, courses) announced
First call for visit and travel grants opened
First committee meetings held
First visit/travel grants awarded
Second BoD meeting
First annual DDSA meeting held

Annual Milestones & Deliverables (2022)
Travel and visit grants (running basis)
Small initiatives (events, symposia, courses, ideas, etc. < DKK 50,000) (running basis)
2x calls for input & ideas (and 2x corresponding ENC meetings to review them)
BoD meetings 4x yearly
Newsletters
PhD Fellowship call opens
PhD Fellowships awarded
Postdoc Fellowship call opens
Postdoc Fellowships awarded
Annual DDSA meeting (2 days)
Annual MSc retreat
DDSA Winter/Summer school
Annual report (reporting on the previous year)

5 The field of data science is so broad that DDSA has chosen to fund summer/winter schools based on applications to ENC, rather than organise them.

Board of Directors (BoD)

The Board of Directors is the leading body of DDSA.

Board of Directors (BoD)		
Lars Kai Hansen (Chair)	Technical University of Denmark	Professor and Section Head at Department of Applied Mathematics and Computer Science
Anders Krogh (Vice-Chair)	University of Copenhagen	Professor at Department of Computer Science and Head of Health Data Science
Ira Assent	Aarhus University	Professor at Department of Computer Science
Katja Hose	Aalborg University	Professor at Department of Computer Science
Claudio Pica	University of Southern Denmark	Professor and Head of SDU eScience Centre at Department of Mathematics and Computer Science
Carsten Utoft Niemann	Rigshospitalet and University of Copenhagen	Clinical Associate Professor and Head of CLL Lab at Department of Haematology
Allan Christian Shaw	Novo Nordisk	Corporate Vice President of Digital & Research Intelligence
Non-voting members		
Kåre Lehmann Nielsen	Aalborg University	Professor at Department of Chemistry and Bioscience
Aasa Feragen	Technical University of Denmark	Professor at Department of Applied Mathematics and Computer Science
Sebastian Weichwald	University of Copenhagen	Assistant Professor (tenured) at Department of Mathematical Sciences

Fellowship Evaluation Committee (FEC)

The Fellowship Evaluation Committee (FEC) consists of 6 national and 6 international members and is responsible for evaluating and nominating candidates for the DDSA Fellowships, as well as monitoring the Travel and Visit Grants. The listed committee members have been appointed for 2.5 years on February 1, 2022.

Fellowship Evaluation Committee (FEC)		
Kåre Lehmann Nielsen (Chair)	Aalborg University	Professor at Department of Chemistry and Bioscience
Barbara Plank	IT University of Copenhagen and LMU Munich	Professor of Natural Language Processing and Chair for AI and Computational Linguistics
Dolores Romero Morales	Copenhagen Business School	Professor at Department of Economics
Jakob Skou Pedersen	Aarhus University and Skejby Hospital	Professor at Bioinformatics Research Centre, AU, and Department of Molecular Medicine, Skejby Hospital
Jes Frellsen	Technical University of Denmark	Associate Professor at Department of Applied Mathematics and Computer Science
Peter Schneider-Kamp	University of Southern Denmark	Professor at Department of Mathematics and Computer Science
Anna Korhonen	Cambridge University, UK	Professor at Institute of Theoretical and Applied Linguistics and Department of Computer Sciences and Technology
Alessandro Cozzi-Lepri	University College London, UK	Associate Professor at Institute for Global Health
Arno Solin	Aalto University, Finland	Assistant Professor at Department of Computer Science
Aurélien Garivier	École Normale Supérieure de Lyon, France	Professor at Département de Mathématiques
Luis Leiva	University of Luxembourg	Associate Professor at Department of Computer Science
Matteo Magnani	Uppsala University, Sweden	Associate Professor at Department of Information Technology

Education & Networking Committee (ENC)

The Education & Networking Committee (ENC) ensures through expertise and experience a broad representation of diverse areas and sub-disciplines within data science. The ENC appoints the Young Academy Panel (YAP) and provides strategic input on the need for new courses, events, and activities to the BoD. The committee is responsible for evaluating and prioritising applications and ideas for large events, activities, and courses, and monitors the small events and course program which runs via the Secretariat. The listed committee members have been appointed for 2.5 years on February 1, 2022.

Education & Networking Committee (ENC)		
Aasa Feragen (Chair)	Technical University of Denmark	Professor at Department of Applied Mathematics and Computer Science
Camilla Sofani Bartholdy	Ministry of Foreign Affairs	Head of Innovation
Deirdre Cronin Fenton	Aarhus University	Associate Professor at Department of Clinical Epidemiology
Hua Lu	Roskilde University	Professor at Department of People and Technology
Jacob Ramlov Jensen	Go Autonomous	Co-Founder, AI/ML Development Lead
Lisbeth Fajstrup	Aalborg University	Professor at Department of Mathematical Sciences
Mads Nielsen	University of Copenhagen	Professor at Department of Computer Science
Mikkel Baun Kjærgaard	University of Southern Denmark	Professor at The Maersk Mc-Kinney Moller Institute
Ole Nørregaard Jensen	University of Southern Denmark	Professor at Department of Biochemistry and Molecular Biology
Roald Forsberg	Raven Bioscience	CEO, Founder
Rikke Sternberg	SAS Institute	Senior Manager
Sisse Rye Ostrowski	Rigshospitalet and University of Copenhagen	Clinical Professor at Department of Clinical Medicine

Appendix B

Cross-Academy Collaboration sub-Committee (CAC)

Cross-Academy Collaboration sub-Committee (CAC)		
Adam Hulman (Chair)	Steno Diabetes Center Aarhus	Senior Data Scientist
Melanie Ganz-Benjaminsen	Rigshospitalet and University of Copenhagen	Associate Professor at Department of Computer Science and Neurobiology Research Unit
Josefine Vilsbøll Sundgaard	Novo Nordisk and Technical University of Denmark	Senior Postdoctoral Researcher
Jesper Kjær	Danish Medicines Agency	Director of Data Analytics Centre

The Cross-Academy Collaboration (CAC) is a sub-committee from the Education & Networking Committee. The members are representatives of the data science field and has expertise which intersects with other national academies such as the Danish Diabetes and Endocrinology Academy (DDEA) and the Danish Cardiovascular Academy (DCA). CAC provides strategic recommendations and input on the need for new courses, events, and activities that intersects the academies, as well as evaluates incoming suggestions from other academies. The listed committee members have been appointed for 2 years in October 2022.

Appendix B

National Advisory Panel (NAP)

The National Advisory Panel (NAP) represents Danish companies (start-ups to large enterprises), non-governmental organisations, and public institutions. NAP provides strategic recommendations to the BoD on how to promote and strengthen alignment and collaboration between DDSA and the Danish industry, and national activities and priorities. The listed panel members have been appointed for 2.5 years on February 1, 2022.

National Advisory Panel (NAP)		
Allan Christian Shaw (Chair)	Novo Nordisk	Corporate Vice President of Digital & Research Intelligence
Anne Bøgh Fangel	Omilon	User Experience Manager
Jens Erik Nielsen	Novozymes	Vice President of Enzyme Research
Laust Hvas Mortensen	Statistics Denmark and University of Copenhagen	Chief Consultant and Professor at Department of Public Health
Lisbeth Knudsen	Mandag Morgen and Altinget	Strategic Director
Mie Sachmann Svane	Läntmannen Unibake	Data & Analytics Manager
Natasha Friis Saxberg	Danish ICT Industry Association	CEO
Nicolai Anton Lynnerup	Universal Robots A/S	Strategic Innovation Researcher
Pernille Tranberg	DataEthics.eu	Co-Founder, Adviser in Data Ethics
Rasmus Engholm	Grundfos – AI Solutions	Lead Data Scientist
Søren Kamaric Riis	Oticon Medical	Chief Research Officer
Thomas Krumbak	The Municipality of Aarhus	Head of Digitalisation

International Advisory Panel (IAP)

International Advisory Panel (IAP)		
Claudia Plant	Universität Wien, Austria	Professor at Faculty of Computer Science
Emilio Carrizosa	University of Seville, Spain	Professor at Faculty of Mathematics
GianMaria Silbello	University of Padua, Italy	Associate Professor
Nathan Baker	University of Washington and Pacific Northwest National Laboratory, USA	Distinguished Faculty Fellow at Department of Applied Mathematics and Laboratory Fellow
Nicolaj Søndergaard Mühlbach	Massachusetts Institute of Technology (MIT), USA	Postdoc
Ivan Ollier-Caparroso	Liverpool John Moores University, UK	Senior Lecturer at School of Computer Science and Mathematics

The International Advisory Panel (IAP) provides expert feedback and recommendations to the BoD on activities and the overall strategy. IAP is responsible for keeping DDSA up to date on new trends and methods outside of Denmark by ensuring awareness and alignment with the international data science community. The listed panel members have been appointed for 2.5 years on February 1, 2022.

Young Academy Panel (YAP)

The Young Academy Panel (YAP) is appointed by ENC and consists of young scientists in the beginning of their career. YAP is responsible for providing feedback on DDSA's strategy and activities to the BoD, as well as input and feedback for new initiatives, events and activities to the ENC. YAP also has a line of tasks with the secretariat such as organizing recurrent DDSA events (e.g., the annual MSc retreat and the DDSA annual conference) and developing the mentoring networks and events. The listed panel members have been appointed for 1.75 year in March 2022.

Young Academy Panel (YAP)		
Sebastian Weichwald (Chair)	University of Copenhagen	Assistant Professor (tenured) at Department of Mathematical Sciences
Anastassia Vybornova	IT University of Copenhagen	PhD Student at Department of Computer Science
Cecilie Utke Rank	Rigshospitalet and University of Copenhagen	Physician and Researcher
Frederica Belmonte	MedEngine	Data Scientist
Jens Ulrik Hansen	Roskilde University	Associate Professor at Department of People and Technology
Jesper Løve Hinrich	Technical University of Copenhagen	Postdoc at Department of Applied Mathematics and Computer Science
Joakim Bruslund Haurum	Aalborg University	PhD Student at Visual Analysis and Perception Laboratory
Jonas Freiderich	University of Southern Denmark	PhD Student at Maersk Mc-Kinney Moller Institute
Kenneth Borup	Aarhus University	PhD Student at DIGIT Centre
Marianne Helenius	Technical University of Denmark	PhD Student at Department of Health Technology
Nicolai Blegvad Thomsen	NTT DATA Business Solutions	Data Scientist
Sara Mesquita	Novozymes	Senior Data Scientist
Tobias Frisch	University of Southern Denmark	Postdoc at Department of Mathematics and Computer Science
Viktor Stenby Johanson	Technical University of Denmark	MSc Student at Department of Applied Mathematics and Computer Science
Martin Axelsen (resigned)	Radiobotics	Co-Founder and Chief Scientific Officer

Small Event Grants 2022

List of recipients of the DDSA Small Event Grants 2022

Small Event Grants 2022	Part 1					
Name	**Organisation**	**Co-organiser(s)**	**Event title**	**Date**	**Granted funding (DKK)**
Muniba Talha	KEA	IDA	Women in Data Science Copenhagen 2022	26.04.2022	28,783
Cecilie Amalie Andersen	DDSC/Trackunit	Ekstra Bladet/JP Politikens Hus	Danish Data Science Community Founding General Meeting	08.04.2022	17,122
Andreas Baum	DTU Compute	University of Copenhagen, Department of Food Science	Dansk Selskab for Kemometri Hackathon	01.10.2022-02.10.2022	33,313
Norbert Krüger	SDU, The Maersk Mc-Kinney Moller Institute	DIREC	International Workshop on Data Re-Use for Robot Assembly	08.09.2022	11,000
Andreas Trier Poulsen	Damvad Analytics		Experience sharing and networking event within Data Science: MLOps	29.09.2022	6,800
Andreas Trier Poulsen	Damvad Analytics		Experience sharing and networking event within Data Science: NLP	16.11.2022	6,800
Anne Helby Petersen	Danish Statistical Society		Temaaften om statistikerens rolle i det danske mediebillede	27.09.2022	24,484
Martin Skovgaard Andersen	DTU Compute, Section for Scientific Computing	Associate Professor Allan Engsig-Karup, DTU Compute, Section for Scientific Computing, Associate Professor Jakob Lemvig, DTU Compute, Section for Mathematics	Mathematics of Data Science	28.09.2022 – 31.05.2023	50,000
Rakul Maria H. Tórgarð	IT University of Copenhagen	Computer Science Department of IT University of Copenhagen	Lille Kat	28.10.2022	7,182
Tina Blegind Jensen	Copenhagen Business School, Dept. of Digitization	ITU, Wake Forest University (US), and the Association for Information Systems (AIS)	Paper-a-Thon in Digitization	10.12.2022-11.12.2022	45,200

Small Event Grants 2022

List of recipients of the DDSA Small Event Grants 2022

Small Event Grants 2022	Part 2					
Name	**Organisation**	**Co-organiser(s)**	**Event title**	**Date**	**Granted funding (DKK)**
Lasse Hjort Jakobsen	Department of Hematology, Aalborg University Hospital	Sandra Eloranta (Dept. of Medicine, Karolinska Institutet), Tarec Christoffer El-Galaly (Dept. of Hematology, Aalborg University), Caroline Weibull (Dept. of Medicine, Karolinska Institutet)	Nordic Lymphoma Epidemiology Group biostatistical workshop	09.05.2022-10.05.2022	50,000
Torben Martinussen	Section of Biostatististics, Institute of Public Health, University of Copenhagen	Dansk Statistisk Selskab. Formand Søren Højgaard, Ålborg Universitet	Symposium in celebration of Per Kragh Andersen's contributions to statistics	15.11.2022-16.11.2022	40,000
Frederik Warburg	Section for Cognitive Systems, DTU Compute	Serge Belongie, Professor, Department of Computer Science, KU, and Director of the Pioneer Centre for AI.	Learning to taste	25.11.2022	40,000
Andreas Søgaard	Niels Bohr Institute, University of Copenhagen	Troels C. Petersen (NBI), Rasmus Ørsøe, and Philipp Eller (Technical University of Munich)	3rd Workshop on Graph Neural Networks for Neutrino Telescope Event Reconstruction	09.05.2023-12.05.2023	50,000
Dolores Romero Morales	Copenhagen Business School	Jimmy Martinez-Correra	Second NeEDS Workshop on the Latest Advances in Machine Learning to Deal with Complex Data	01.12.2022	5,343
Matthias Mattanovich	NNF Center for Basic Metabolic Research, SUND, UCPH, NNF Center for Biosustainability, DTU Biosustain	Marie Locard-Paulet, Postdoc, NNF Center for Protein Research, UCPH, Holda Anagho, PhD student, NNF Center for Protein Research, UCPH	ProteoBench Workshop: Building a community-curated platform for comparison of mass-spectrometry data analysis workflows	06.02.2023-10.02.2023	50,000

Large Event Grants 2022

List of recipients of the DDSA Large Event Grants 2022

Large Event Grants 2022					
Name	**Organisation**	**Co-organiser(s)**	**Event title**	**Date**	**Granted funding (DKK)**
Mark Riis	DTU	All Danish Universities, Digital Tech Summit, DIREC, AI Pioner Centre and DDSA	Young Data Science Talents at Digital Tech Summit - Young researcher-industry collaboration	25.10.2022-26.10.2022	100,000
Eike Petersen	DTU	Niels van Berkel (AAU), Melanie Ganz (NRU, KU), Aasa Feragen (DTU)	Responsible Machine Learning for Healthcare Workshop	28.10.2022-29.10.2022	99,000
Laura Alessandretti	DTU	Luca Aiello (ITU), Frederik Georg Hjorth (UCPH), Josefine Bohr Brask (DTU)	International Conference in Computational Social Science (IC2S2)	17.07.2023-20.07.2023	100,000
Andreas Berre Eriksen	Ambolt AI	AAU, AU, DTU, ITU, KU, RUC, SDU, ATV, DIREC, AI Denmark, Digital Tech Summit	DM I AI - Danish Championship in AI for students	04.10.2022-10.10-2022	100,000
Henriette Lipczak	Regionernes Kliniske Kvalitets-udviklingsprogram	The Danish Center for Clinical Health Services Research (DACS) and the Organization of Danish Medical Societies (LVS)	Clinical Quality Conference 2022	29.11.2022-30.11.2022	100,000
Joanna Bergström	Human Centered Computing, University of Copenhagen	The Pioneer Centre for Artificial Intelligence, with input from University of Southern Denmark and Aalborg University.	Learning through XR	11.11.2022	100,000

Small Course Grants 2022

List of recipients of the DDSA Small Course Grants 2022

			Small Course Grants 2022		
Name	**Organisation**	**Co-organiser(s)**	**Event title**	**Date**	**Granted funding (DKK)**
Allan Peter Engsig-Karup	DTU Compute	Professor Kim Knudsen, Head of PhD school, DTU Compute	Scientific Machine Learning	13.06.2022-17.06.2022	19,000
Mark Riis	DTU Compute	DIREC, AI Pioneer Centre, University of Aarhus and Copenhagen Business School	Young Researcher Entrepreneurship Academy	22.05.2022-24.05.2022	20,000
Morten Mørup	DTU	Abdulkadir Çelikkanat	Advanced Topics in Machine Learning: Graph Representation Learning	22.08.2022-26.08.2022	46,500
Jamal Jokar Arsanjani	Department of planning, Aalborg University	Prof. Carsten Kessler	Geographical Data Science using Python	19.04.2023-21.04.2023	24,500
Christian Hirsch	Department of Mathematics, Aarhus University	C.A.N. Biscio, L. Fajstrup (Aalborg University), O. Cronie (Chalmers University of Technology)	Danish-Swedish Summer School on Topological Data Analysis & Spatial Statistics	26.06.2023-30.06.2023	35,500

Large Course Grants 2022

List of recipients of the DDSA Large Course Grants 2022

Large Course Grants 2022					
Name	**Organisation**	**Co-organiser(s)**	**Event title**	**Date**	**Granted funding (DKK)**
Bernardo Machado David	ITU	Carsten Baum, Assistant Professor, Aarhus University	Summer School on Privacy-Preserving Machine Learning	01.08.2022-04.08.2022	50,000
Maria Maistro	UCPH	Toine Bogers, Associate Professor (AAU CpH), Christina Lioma, Professor (UCPH) Alan Said, Associate Professor (University of Gothenburg)	Summer School on Recommender Systems	12.06.2023-16.06.2023	100,000
Nicki Skafte Detlefsen	DTU	Søren Hauberg, DTU Compute	Machine Learning Operations Summer School (MLOpsSS)	17.10.2022-22.10.2022	64,000
Thomas B. Moeslund	Aalborg University	Jon Sporring, DIKU; Rasmus R. Paulsen, DTU; Dan Witzner Hansen, ITU	Summer school on missing data, augmentation, and generative models	14.08.2023-18.08.2023	100,000
Jes Frellsen	DTU Compute	Assistant Professor Jakub M. Tomczak, Vrije Universiteit Amsterdam, Pioneer Centre for Artificial Intelligence and ELLIS	Deep generative modelling summer school (DGMSS)	26.06.2023-30.06.2023	100,000

DDSA Grand Opening 2022

Event programme from DDSA Grand Opening, June 20, 2022

Programme

Words from the foundations

Lene Oddershede, Senior Vice President, Novo Nordisk Foundation

Lars Hansen, Executive Director/CEO, VILLUM FONDEN

Ulrik Nicolai de Lichtenberg, Senior Scientific Manager, Novo Nordisk Foundation

#Growing Danish Data

Sofie Castella, Managing Director DDSA

Keynote - Data & Science

Serge Belongie, Director and Professor, Pioneer Centre for AI

Keynote - Data & Society

Lisbeth Knudsen, Strategic Director, Mandag Morgen / Altinget

Keynote - Data & Creativity

Cecilie Wagner Falkenstrøm, Artist & Founder, Artificial Mind

Announcement of the 10 first DDSA PhD Fellows

Reception

Pre-Graduate Retreat 2022

Event programme from DDSA Pre-Graduate Retreat, October 4-5, 2022.

DDSA Pre-Graduate Retreat – Programme

October 4th (Tuesday)			
12:30	13:00	Registration	
13:00	13:10	Welcome & intro	
13:10	14:00	*Session 1* Data Science in Denmark	▪ Lars Kai Hansen, Professor, DTU Compute, Chair of the DDSA BoD
14:00	14:50	*Session 2* What's a PhD? Doing a PhD	**What's a PhD?** ▪ Anders Møller, Professor, Head of PhD Programme, Computer Science, AU **Doing a PhD** ▪ Bethany Chamberlain, PhD Student, Dept. of Computer Science, ITU ▪ Marianne Helenius, PhD Student, DTU Healthtech
14:50	15:00	Coffee pick-up	
15:00	15:30	*Session 2 continued*	**Q&A panel**
15:30	16:30	Social activity	
16:30	18:00	*Session 3* What's after a PhD?	▪ Nicolai Anton Lynnerup, Research & Innovation Engineer, Universal Robots A/S ▪ Leonard Henckel, Postdoc, UCPH, Copenhagen Causality Lab ▪ Adam Hulman, Senior Data Scientist, Steno Diabetes Center, Aarhus **Q&A walkabout**
18:00	20:00	Dinner	

October 5th (Wednesday)			
08:00	09:00	Breakfast	
09:00	10:00	*Session 4* Why does Data Science matter?	▪ Therese Graversen, Associate Professor, Dept. of Computer Science, ITU ▪ Rasmus Bro, Professor, Dept. of Food Science, UCPH ▪ Sara Mesquita, Lead Data Scientist, Novozymes
10:00	11:00	*Session 5* How could data science matter?	Working in groups to develop project ideas.
10:45	11:00	Coffee pick-up	
11:00	11:30	*Session 5 continued*	Project Pitching
11:30	12:30	*Session 6* Where do you go from here?	▪ Jesper Løve Hinrich, Postdoc, Dept. of Food Science, UCPH ▪ Marius Cortzen, Service Designer, DDSA: The DDSA Mentoring Programme
12:30	14:00	Lunch	

DDSA

Danish Data Science Academy

PhD Networking Event 2022

Event programme form DDSA and Pioneer Centre for AI PhD Networking Retreat, October 21-22, 2022

DDSA - P1
PhD networking retreat

Oct 21, 2023

Time	Activity
14:30-15:00	Registration & Welcome coffee
15:00-15:10	Welcome • Michelle Cumming Løkkegard, P1 • Sofie Inari Castella, DDSA
15:10-16:00	One minute madness
16:00-16:45	Group discussion
16:45-17:15	Break & Check in
17:15-17:45	Game time!
17:45-18:45	Meet & Greet Speed networking session with: • Nicki Skafte Detlefsen, Cognitive Systems, DTU • Pablo Moreno-Muñoz, Cognitive Systems, DTU • Flavia Dalia Frumosu, Statistics, DTU
18:45-20:45	Dinner
20:45	Free time - walks, hang out in the bar, play games - relax!

Oct 22, 2023

Time	Activity
09:00-10:00	Working groups
10:00-11:30	Keynote Roberta Sinatra (University of Copenhagen / ITU)
11:30-11:50	Coffee Break
11:50-12:30	A look into the future
12:30-13:30	Lunch

DDSA Danish Data Science Academy

PIONEER CENTRE FOR ARTIFICIAL INTELLIGENCE

Danish Data Science 2022

Event programme from Danish Data Science 2022, November 7-8, 2022.

Danish Data Science 2022

Monday November 7th

Time	Session	Location
10:00	Registration and breakfast	Conference centre entrance
10:45	Welcome	Auditorium A
11:00	Keynote 1: Mihaela van der Schaar Machine learning for healthcare: Opportunities, Current Solutions and Next Frontiers	Auditorium A
11:45	Networking lunch	Panorama Restaurant
12:45	Keynote 2: Mine Çetinkaya-Rundel Welcoming learners to data science with the tidyverse	Auditorium A
13:45	Parallel sessions	See below
16:00	Coffee break	Foyer
16:30	#GrowingDanishDataScience	Multihuset
18:00	Break	
18:30	Keynote 3: Sune Lehmann + drinks What do we do when our work might break society?	Foyer + Auditorium A
19:30	Dinner	Dungeon Restaurant

Parallel sessions

Title	Speakers	Location
PS1. Machine Learning in Production: MLOps is all you need?	Nicki Skafte Detlefsen (DTU), Mikkel Baun Kjærgaard (SDU),Emil Jørgensen Njor (DTU), Anna Hye Øjgaard (Lorenz Technology), Carsten Stahlhut (Novo Nordisk), Søren Sønderby (Twig.energy)	Meeting room C
PS2. Generative Models	Tom Rainforth (University of Oxford), Andres Masegosa (AAU), Federico Bergamin (DTU)	Meeting room D
PS3. Open Science	Jean Baptiste Poline (Aperture), Michael Kofia Landi, Stephan Heunis (DataLad), Gael Varoquaux (scikit learn), Wee Hyong (Microsoft Azure)	Auditorium A
PS4. Data Quality in Data Science	Kim Mouridsen (AU), Alexander Junge, (CORTI), Nathaniel Joselson (CORTI), Jacob Ramløv Jensen (Go Autonomous), Hua Lu (RUC), Huan Li (AAU)	Auditorium B
PS5. Data Science in the Wild	Monica Jane Emerson (Novo Nordisk), Ulrik Kristoffer Stoltze (Rigshospitalet), Mads Schreiner Simonsen (ATP), Federica Belmonte (MedEngine), Kristoffer Hougaard Madsen (DTU & DRCMR)	Meeting room U.14
PS6. Patient benefit from risk assessment models and tools	Carsten Utoft Niemann (Rigshospitalet and UCPH), Charles Vesteghem (Aalborg University Hospital), Jakob Skou Pedersen (AU and Skejby Hospital), Franci Susanne Johansen (Region Hovedstaden)	Meeting room U.11
PS7. Applying Causal Methods	Helene Rytgaard (DTU), Julian Schüssler (AU), Arne Henningsen (KU), Søren Mogensen (Lund University)	Meeting room U.8
PS8. Geometry and Topology in Machine Learning	Stefan Sommer (UCPH), Christophe Biscio (AAU), Helene Hauschultz (AU), Christian Pascal Hirsch (AU), Miguel González-Duque (ITU)	Meeting room U.3

Danish Data Science 2022

Tuesday November 8th

Time	Session	Location
09:00	Keynote 4: Sara Magliacane Causality-inspired ML: What can causality do for ML?	Auditorium A
09:45	Coffee break	Auditorium A
10:15	Parallel sessions	See below
12:15	Poster session and lunch	Multihuset
14:00	Coffee break	Foyer
14:15	Keynote 5: Theofanis Karaletsos ▪ Co-organised with P1 From probabilistic modeling to drug discovery	Auditorium A
15:00	Keynote 6: Julien Simon ▪ Co-organised with DDSC Hyperproductive Machine Learning with Transformers and Hugging Face	Auditorium A
15:45	Closing session	Auditorium A
16:30	End of the conference	
17:00	PhD student networking dinner (Separate registration required)	Foyer

Parallel sessions

Title	Speakers	Location
PS9. Reproducible AI & Experiment Tracking using MLOps	Morgan McGuire (Weights & Biases), Martin Carsten Nielsen (Alvenir)	Auditorium A
PS10. Generative models	Anna Kusina (Vrije Universiteit Amsterdam), Babak Esmaeili (University of Amsterdam), Ole Winther (DTU and UCPH)	Meeting room C
PS11. Data Science Educations: What is the Road to Success?	Jens Ledet Jensen (AU), Morten Mørup (DTU), Mikkel Baun Kjærgaard (SDU), Raghava Rao Mukkamala (CBS), Therese Graversen (ITU), Thomas Dyhre Nielsen (AAU), Hua Lu (RUC)	Meeting room U.14
PS12. (Un)code the bias: Algorithmic Fairness in Data Science	Niels van Berkel (AAU), Pernille Tranberg (DataEthics.eu), Eike Petersen (DTU)	Meeting room D
PS13. Bioinformatics	Michael Schantz Klausen (Evaxion Biotech), Christian Thygesen (Evaxion Biotech), Mikkel Hovden Christensen (AU), Rasmus Froberg Brøndum (AAU) Morten Birk (FieldSense A/S)	Auditorium B
PS14. Open Source	Lasse Hansen (AU), Kenneth Enevoldsen (AU), Anders Pedersen (Alexandra Institute), Paul Sørensen (Energinet), Bjørn Dörr Jensen (Energinet)	Meeting room U.11