

DATA SCIENCE LAB

ANNUAL REPORT 2021

UNIVERSITY OF COPENHAGEN
FACULTY OF SCIENCE





**Data Science Lab
aims to enhance the quality
of scientific data analyses in
research carried out at
SCIENCE**

**We do this through courses,
workshops, collaboration
with researchers, and
counseling of students and
researchers**

HISTORY

- 2020-2023
KU Data Science Lab (one of five)
- 2018-2019
Data Science Lab
- 2013-2017
Laboratory for Applied Statistic
- 2013
Merge of faculties with different traditions

FUNDING

Hosted by Department of Mathematical Sciences (MATH) and Department of Computer Science (DIKU)

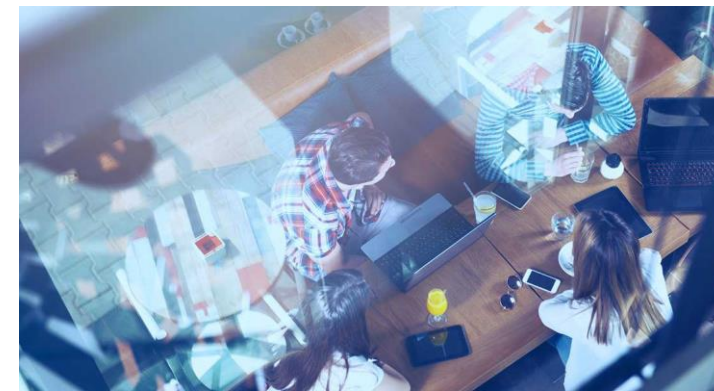
Funded with 2+2 FTE, from SCIENCE 2018-2019
Shared between UCPH and SCIENCE from 2020

Seven academic staff members are affiliated with the Lab



OVERVIEW OF ACTIVITIES

- Research collaboration
- Consultancy meetings with students and researchers
- Four PhD courses per year
- Short courses about Python, R, and Data Science
- Supervision of BSc and MSc theses in collaboration with other departments or private companies
- Presentations at PhD courses, visits to sections, dissemination
- For payment: Courses and counseling for public offices and private companies



HIGHLIGHTS FROM 2021

We have continued the dissemination of methods and tools for data analysis in our courses, and helped researchers and students via our consultations. And we have hired two student assistants to help with collaboration projects.



Bo Markussen (MATH)
Head of Laboratory (Statistics)

In 2021 we have expanded our collaborations with the other Data Science related researcher services at SCIENCE: the SCIENCE AI Centre and the High Performance Computing Centre. Thereby, the researchers will get easier access to all services no matter where they start.



Erik Bjørnager Dam (DIKU)
Head of Laboratory (Computer Science)

ADVICE ON THE FUTURE DIRECTION

USER PANEL

In 2020 we established a user panel. The members provides feedback on existing activities as well as input to new/adjusted activities such that researchers and students at SCIENCE can benefit the most from the lab.

Members of the user panel:

DEPARTMENT	MEMBER
PLEN	Giorgio Tomasi
IGN	Jesper Riis Christiansen
FOOD	Rasmus Bro
IFRO	Arne Henningsen
NEXS	Anne Raben
IFRO	Lasse Læbo
CHEM	Jan H. Jensen

The Faculty Research Committee (SFU)

We receive advice from SFU on the future direction for the Data Science Lab where we present a yearly report and discuss the future directions.

We will meet with SFU again in 2022.



RESEARCH COLLABORATION AND PUBLICATIONS

WHAT

- ✓ Open for counseling of all researchers from SCIENCE (PhD students and up)
- ✓ Range from a single meeting or email to co-authorship and development of new stat / cs methods
- ✓ Collaboration with scientists outside SCIENCE, some for payment

In 2021 we had **56** new approaches
(plus 132 short consultancy meetings with PhD/Post Doc/Prof)

18 of the approaches have potential for collaboration
(joint papers and/or grant submission)

26 cross-disciplinary journal/conference publications

COURSES

WHAT

- ✓ Introduction to R for PhD students and up, 1.5 days
- ✓ Introduction to Python for students and employees, 2 days
- ✓ Statistical Methods for the Biosciences I, 4.5 ECTS
- ✓ Statistical Methods for the Biosciences II. Project course, 3 ECTS
- ✓ Machine Learning and Imaging Methods, 3 ECTS
- ✓ Machine Learning and Imaging Projects. Project course, 4.5 ECTS

Number of participants on courses in 2021

Course	Number of participants
Introduction to R	18 participants
Introduction to Python	69 participants Including 42 BSc/MSc
Statistical Methods for the Biosciences I	53 participants
Statistical Methods for the Biosciences II	13 participants
Machine Learning and Imaging Methods	49 participants
Machine Learning and Imaging Projects	12 participants

CONSULTANCY FOR STUDENTS

WHAT

Consultancy meetings with students two times per week at Nørre Campus or Frederiksberg Campus.

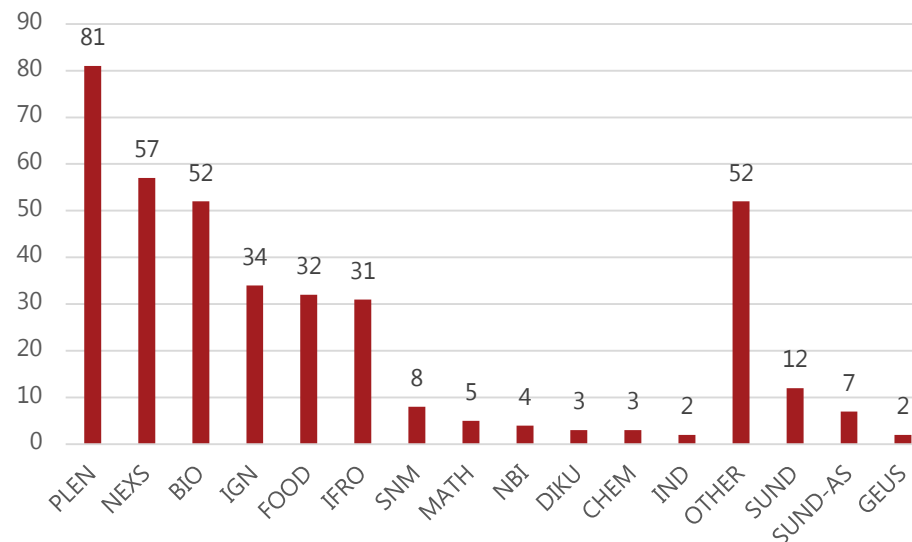
Meetings last 20 min.

Students at all levels are welcome

In 2021 we had **385** consultancy meetings with students

Most visitors write their MSc thesis (58%), but PhD students (25%), BSc students (7%), and others (10%) also show up.

All departments were represented in 2021:



VALUE CREATED VIA DSL

WHAT

The primary purpose of DSL is to create/support/augment interdisciplinary science.

However, for some of the activities funded by the 2.9 mio kr per year, we can also estimate a monetary value.

In 2021, some of the additional value can be estimated as

Deliverable	Est. value (tkr)
ECTS activities (633 ECTS at 60 tkr per STÅ)	633
External participants	49
Consultancy services	353
Research grants (interdisciplinary with DSL PI/coPI)	2,994
Total	4,028

CURIOUS FOR MORE INFORMATION?

Visit our website at
datalab.science.ku.dk

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Data Science Laboratory

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Data Science Laboratory

At the Data Science Laboratory we aim to enhance the quality of scientific data analyses in research carried out at SCIENCE. We do this through courses, workshops, collaboration with researchers, and counseling of students and researchers.

BOOK A MEETING WITH US

Consultations for researchers and students

WORKSHOPS AND PHD COURSES

Workshops in Python and R and various PhD courses

COLLABORATE WITH US

Brief guidance, Co-supervision of PhD students, larger collaborations etc.

ABOUT US

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STAFF AT THE LAB

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CONTACT US

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