CENTRE DE COMPÉTENCES EN SCIENCE DES DONNÉES

16 September 2021

Guive Khan-Mohammad, PhD
CCSD’S Vision and Mission

• By leveraging our strengths of interdisciplinarity and critical transversal approach, we apply data science to understand complex problems, contributing to strengthen the status of scientific excellence of our university in the era of big data and to develop skills, initiatives and concrete solutions for the public good.

• The Data Science Competence Center (CCSD) at the University of Geneva's mission is to bring together the skills and initiatives of UNIGE in data science, with the aim, through transversality, of promoting the emergence of innovative research and of supporting a critical and informed transformation of scientific culture in the era of big data.
CCSD’s structure
Promoting interdisciplinary research
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• **2020-21 Theme:**
  - Epidemics and (Big) Data: Contributions and Challenges of Data Science in the Study of Diffusion Phenomena
Promoting interdisciplinary research

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• 2020-2021 Funded Project:
  – Developing a multinetwork big data approach to the study of global epidemic governance: A pilot study on norm diffusion regarding antimicrobial resistance
Promoting interdisciplinary research

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- **2021-2022 Theme:**
  - Shaping a better future with data: Data science for sustainable development goals
Promoting interdisciplinary research

- "Exploring together cutting-edge themes of data science“

- 2020-2021 Program:
  - 11 Nov. ’20: Exploring Data Quality
  - 11 Jan. ’21: How data is powering more open and collaborative forms of science
  - 11 Mar. ’21: When nothing is easy: Dealing with heterogeneous data and interoperability issues
  - 11 May ’21: Data Protection and Ownership

- [datascience.unige.ch/recherche/data-science-seminars/](datascience.unige.ch/recherche/data-science-seminars/)
Promoting interdisciplinary research

• "Exploring together cutting-edge themes of data science“

• 2021-2022 Program:
  – 11 Nov. ’21: Natural language processing
  – 11 Jan. ’22: Social bias in/on data
  – 11 Mar. ’22: Images processing
  – 11 May ’22: Machine learning

• [datascience.unige.ch/recherche/data-science-seminars/]
CCSD’s structure
Transforming scientific practices
Transfomrating scientific practices

• "Finding solutions to methodological issues through interdisciplinary collaboration”

• 2020-21 Program :
  – 12 Oct. ’20 : Research Center for Statistics (RCS)
  – 12 Apr. ‘21 : Consulting Platform in Applied Mathematics and Statistics (CAMAS)

• datascience.unige.ch/recherche/data-science-clinics/
Transforming scientific practices

• "Finding solutions to methodological issues through interdisciplinary collaboration“

• 2021-22 Program :

• datascience.unige.ch/recherche/data-science-clinics/
Transformating scientific practices

• “Sharing expertise on existent tools and methods in Data Science“

• 2020-21 Program:
  – 1 Oct. ’21: Jupiter Notebook – Lorenzo Perrozi
  – 1 Nov. ’21: Jupiter Hub – Jonathan Chambers
  – 1 Dec. ’21: Regression methods – Marta Pittavino
  – ...
Transforming scientific practices

dataforum.unige.ch
CCSD’s structure
Bolstering education in data science

DS Summer School
Bolstering education in data science

“Making available an interdisciplinary and original learning offer in data science to the entire UNIGE student community, by digitizing courses and seminars in the form of pedagogical video capsules, and publishing them on a dedicated platform”
Bolstering education in data science

- “Deepening and applying the learning content of Data Science for All”

DS Summer School
CCSD’s structure
Improving exposure and accessibility

DS Skills Repository
Improving exposure and accessibility

Discover "Learning from Data", the podcast that delves into the research of the University of Geneva and, above all, into their data, in the company of those who explore them.

On the program: artificial intelligence, digital law, digital humanities... A fascinating and interdisciplinary journey to the heart of the data science expertise of the UNIGE community.

A new episode every month!
Improving exposure and accessibility

DS Skills Repository

https://datascience.unige.ch/en/experts-network
Data Science Experts Network

More than 400 people
Three «communities»
Three «communities»

Data Science as a Knowledge:
- Research Center for Statistics
- Centre Universitaire d’Informatique
- Computer Science Department
- Section of Mathematics
- & more...
Three «communities»

Data Science as a Tool:
- Department of Astronomy
- Department of Nuclear and Particle Physics
- Department of Radiology and Medical Informatics
- Institute for Environmental Studies
- Geneva School of Economics and Management
- Institute of Demography and Socioeconomy
- Department of Geography
- Global Studies Institute
- Center for Philanthropy
- Digital Humanities
- Faculty of Translation and Interpreting
- & more...
Three «communities»

Data Science as a Research Object:
- Digital Law Center
- Geneva School of Social Sciences
- Institute for Ethics, History and the Humanities
- Faculty of Psychology and Educational Sciences
- & more...
All skills for all needs

- Data collection,
- Data management and engineering,
- Statistics,
- Algorithms,
- Machine learning,
- Semantics,
- Coding,
- Optimization,
- Visualization,
- Law
- ...

- A strong community able to tackle the most ambitious and cutting-edge challenges
Welcome to UNIGE’s Data Science Day 2021
Data Science Day 2021

8h30-8h45: Welcome and introduction – Uni Mail, MR290

8h45-10h00: Data Science and SDGs: Data-driven policy for public good – Uni Mail, MR290

10h00-10h30: Coffee break – Uni Mail, Cafeteria Marx

10h30-12h30: Data Science and SDGs: an overview of UNIGE’s researchers contributions – Uni Mail, MR290

12h30-14h00: Lunch break – Uni Mail, Cafeteria Marx

14h00-15h30: The CCSD in 2020-21: a hub for thriving interdisciplinary collaborations – Uni Mail, MR290

15h30-16h00: Coffee break – Uni Mail, Cafeteria Marx

16h00-17h30: Round tables
Thank you

• More information on datascience.unige.ch
• For any questions, commentaries and contributions, do not hesitate to contact Guive.Khan@unige.ch or ccsd@unige.ch