

Henrik Kragh Sørensen

Strategic Advisor | AI Implementation | Digital Transformation

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Profile

I think through data — very large amounts of it. For 20 years I have worked with AI and data analysis, and my experience and strengths lie where complex problems require both deep domain knowledge and practical problem-solving. I work independently and thoroughly, and I am strong at building bridges: between disciplines, between technology and organisation, and between data and decision. With a background in leadership, AI implementation, and strategic advising, I bring both analytical precision and the ability to communicate complex findings to non-technical stakeholders.

Core Competencies

Data Analysis & Infrastructure

- Big data processing: ML analysis of millions of documents
- Data-driven management information for strategic decision support
- AI implementation: LLM integration, computer vision, automation
- Technologies: Python, Claude, SQL, C/C++

Project Management & Strategy

- Portfolio management of cross-disciplinary projects
- Organisational analysis and strategic development
- Cross-disciplinary collaboration across humanities and science
- Grant applications and research funding management

Leadership Experience

- Deputy Head of Department (2017–2021): Strategic development, staff engagement, scenario analysis
- Head of Section (2016–2021): Performance reviews, recruitment, team development, budget responsibility
- Assessment committees: Evaluation and hiring at all academic levels

Selected Projects & Results

Show Me a Mathematician

2024 – present

Research Project Lead | DH4PMP, University of Copenhagen

What does AI imagine when asked to picture a researcher or a farmer? The answer reveals assumptions that most organisations deploying generative AI have never examined.

- Systematically sampled thousands of AI-generated images of researchers across disciplines to map implicit stereotypes in frontier models.
- Designed a three-layer coding scheme for analysing images across dimensions of gender, ethnicity, appearance and setting.
- Applied findings to identify default assumptions in models used for HR, communication, and product development.

AI Bias in Image Generation

2024 – present

Research Project Lead | DH4PMP, University of Copenhagen

Auditing AI bias at scale requires robust, reproducible methods; this project developed exactly that infrastructure.

- Developed empirically grounded methodologies for prompt design, iterating systematically to ensure stable and reproducible outputs across model runs.
- Applied a multi-model pipeline selecting tools by task: CLIP for image analysis, LLaVA and Claude Haiku for description and classification.

- Investigated how frontier models represent gender, ethnicity, and professional role using implicit and contrastive prompting to surface hidden defaults.
- Built a reusable coding framework applicable to auditing generative AI use across organisational contexts.

Digital Humanities for Philosophy of Mathematical Practice (DH4PMP)

2018 – present

Research Group Leader | University of Copenhagen

Understanding mathematical research practice at scale requires combining computational infrastructure with cross-disciplinary expertise; DH4PMP was built around exactly that combination.

- Designed and built an agentic AI orchestration pipeline across Claude App, Claude Code, and project infrastructure.
- Built data infrastructure for processing large corpora of scientific publications.
- Implemented LLM-based analysis tools for automated literature processing, including bibliographic metadata extraction.
- Fine-tuned object detection models on domain-specific corpora, including dataset curation, annotation, and iterative retraining.

Work Experience

Professor

2016 – present

University of Copenhagen

- Teaching philosophy of science for students in computer science, mathematics, and machine learning
- Supervision of research projects at bachelor and master level
- Public outreach through TV, radio, newspapers, and public lectures; author of 7 books and some 80 peer-reviewed articles

Deputy Head of Department for Research

2017 – 2021

University of Copenhagen

- Strategic development and follow-up, including international evaluation processes
- Advisory role to senior management on research strategy, resource allocation, and organisational development
- Preparation of scenario analyses and decision briefs for leadership
- Coordination of cross-organisational initiatives and research collaborations

Section and Research Group Leader

2016 – 2021

University of Copenhagen

- Personnel responsibility including performance reviews (MUS)
- Recruitment and retention of researchers; support for early-career researchers
- Budget responsibility and resource management for research group

Associate Professor

2007 – 2016

Aarhus University

Research on Danish mathematics 1850–1970.

Postdoc

2003 – 2007

University of Agder (Norway) & Utrecht University (Netherlands)

Research on the development of mathematics in the 19th century and in Scandinavia since 1850.

Student Programmer 1994 – 1998
Centre for Labour Market Studies, Aarhus
System administration and data processing of economic-demographic datasets (SAS).

Education

PhD, History of Mathematics 1998 – 2002
Aarhus University
Dissertation on the development of mathematics in the 19th century; focus on Niels Henrik Abel.

MSc, Mathematics & Computer Science 1992 – 1998
University of Copenhagen
Specialisation in combinatorics and computational mathematics (C/C++).

Courses & Continuing Education

In progress (2026)

- AI for Business Specialization (Wharton School, University of Pennsylvania)
- Microsoft Power BI Data Analyst Professional Certificate
- Google Project Management Professional Certificate

Completed

- Research Leadership (University of Copenhagen, 2017)
- Leadership Course (Aarhus University, 2014)
- PhD supervision and didactics (multiple courses, 2000–present)

Awards & Recognition

- **Montucla Prize 2009** — International Commission on the History of Mathematics: Best article by a young researcher published in *Historia Mathematica* 2005–2008

Technical Skills

Python ●●●●●●●○ *Advanced (10+ years)*
SQL ●●●●○○○○ *Proficient (historical)*
C/C++ ●●●●●●○○ *Solid (20+ years)*
LaTeX ●●●●●●●○ *Expert (25+ years)*

AI/ML: LLM integration, computer vision, scikit-learn, pandas, prompt engineering, Claude API

Web & APIs: Flask, FastAPI, RESTful APIs, Google/Bing APIs, arXiv, DOI lookup

Infrastructure: Linux/Ubuntu, Apache, Git

Languages & Communication

Danish ●●●● *Native*
English ●●●●○ *Fluent (academic + technical)*
Norwegian ●●●○○ *Good comprehension (reading/speaking)*

Communication: TV, radio, newspapers, public lectures, research outreach

References and further information available on request.