Steven Hicks, Ph.D.

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Bio

Steven Hicks is a researcher at SimulaMet and has a strong background in computer science and AI. He specializes in the interdisciplinary application of AI methodologies across various domains and modalities. A central part of his research is the transparent and explainable use of AI, with an emphasis on ethical and reliable solutions. His research involves the use of cutting-edge AI technologies to solve complex problems in sectors such as healthcare, sports, education, and telecommunications. In the project team, he brings deep technological expertise in AI, covering both the underlying technology and various application areas.

Selected Projects

2023 **EndoNet, American Society for Gastrointestinal Endoscopy** Engineered a robust system for the acquisition and annotation of colonoscopy data from multiple healthcare centers across the United States. The platform aims to establish a comprehensive dataset to serve as a benchmark for future AI solutions in the field of gastrointestinal care.

2022 **Match-Fixing, Unibet and SEF** Collaborated with SEF and Unibet in the design and implementation of a web-based application geared towards detecting match-fixing in soccer. The software features intricate statistics and data visualization modules to identify potential fraudulent activities. The application was developed using Next.js (front-end and back-end).

2020 **Smittestopp, Simula** Contributed to the first version of the Smittestopp application as a member of the data science team. Responsibilities included visualizing user trajectories, validating contact events, and devising algorithms for the classification of different modes of transport. Everything was implemented in Python.

2019 **Gastrointestinal AI, Augere AS** Partnered with Augere AS to construct datasets and AI solutions that facilitate the automatic detection of gastrointestinal diseases, thereby streamlining diagnostic processes. Models were implemented in Python using TensorFlow and PyTorch.

2018 **Fish Feeding, Spillfree Analytics** Designed and implemented algorithms for fish detection and classification with the objective of automating feeding procedures in aquaculture. The algorithms were developed in Python using TensorFlow and PyTorch.

2017 **Data Store Application, DHIS2** Developed a web application to manage data storage within the DHIS2 ecosystem at the University of Oslo. The application was subsequently integrated into the official DHIS2 platform, leading to part-time employment. The app was implemented in pure JavaScript.

Subscription Application, DNB Created a financial analytics application that scrutinizes nettbank transactions to provide users with an organized overview of daily, weekly, and yearly recurring expenses. The app also includes social features to share subscriptions with friends via Facebook. The app was developed using a React and Redux stack. There was no back-end, only DNB's internal APIs.

Experience

2022 – present **Research Scientist, SimulaMet** Engaged in interdisciplinary research exploring the applicability of artificial intelligence in fields such as medicine and education, with a specialized focus on ensuring algorithmic transparency.

Experience (continued)

2023 – present   ▉ **CTO, Innsikt.AI** Serving as the Chief Technology Officer at a cutting-edge startup, spearheading the development of virtual child avatars for advanced police training modules concerning interviews with abused children.

   ▉ **Lecturer, BI Norwegian Business School** Instructing an undergraduate-level introductory course on data science, integrating both theoretical and practical components to foster student understanding.

2022 – present   ▉ **Data Scientist, ForzaSys** Contributed to the design and implementation of algorithms for the automated clipping and highlight generation of soccer matches. Played a key role in software development efforts aimed at the detection and prevention of match-fixing activities.

2019 – 2020   ▉ **Lecturer, Høyskolen Kristiania** Delivered lectures in both introductory computer science and machine learning courses, incorporating active learning strategies to improve student comprehension and engagement.

2017 – 2018   ▉ **Front-End Developer, DHIS2** Focused on performance optimization of table rendering processes and contributed to the development of applications geared toward efficient data access and management.

2014 – 2016   ▉ **Full-Stack Developer, Axios AS** Involved in the end-to-end development and design of loan management software for a US-based mortgage institution, ensuring compliance with industry standards.

Education

2018 – 2022   ▉ **Ph.D. Computer Science, Oslo Metropolitan University**
Thesis title: *Transparency in Medical Artificial Intelligence Systems.*

2016 – 2018   ▉ **M.Sc. Computer Science, University of Oslo**
Thesis title: *Mimir: An Automatic Reporting and Reasoning System for Screening of the Gastrointestinal Tract Using Deep Neural Networks.*
Grade: *A*

2012 – 2015   ▉ **B.Sc. Information Technology, University of Agder**
Grade: *A*

Skills

Languages   ▉ Strong reading, writing and speaking competencies for English and Norwegian.

Coding   ▉ Python, Java, PHP, R, C, C++, C#, Rust, SQL, and LaTeX

Tools   ▉ PyTorch, TensorFlow, Git, Ansible, Docker, Kubernetes, Linux, and Redis.

Databases   ▉ MySQL, PostgreSQL, SQLite, and MongoDB.

Misc.   ▉ Academic research, teaching, training, and consultation.

Miscellaneous

Awards and Achievements

2021   ▉ Winner of the 2021 version of the Endoscopy Computer Vision Challenge.

2019   ▉ Best of DDW ASGE for my paper on Deep Learning for Automatic Generation of Endoscopy Reports.

Miscellaneous (continued)

      ■ Included in the best paper track of the 17th International Conference on Content-Based Multimedia Indexing for our paper on Semantic Analysis of Soccer News for Automatic Game Event Classification.

2018   ■ Awarded most innovative approach on the MultiMediaEval benchmark 2018.

2017   ■ Distinctive mention at hackathon held by DNB in Oslo, Norway.