

# Steven Hicks, Ph.D.

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## Bio

- 📌 I have a strong background in computer science and artificial intelligence (AI) research. I specialize in the interdisciplinary application of AI methodologies across various domains and modalities. A central part of my research is the transparent and explainable use of AI, with an emphasis on ethical and reliable solutions. My research involves leveraging cutting-edge AI technologies, including PyTorch, to solve complex problems in sectors such as healthcare, sports, education, and telecommunications. I have a deep passion for software development and take great pride in creating solutions that have a meaningful impact.

## Skills

Programming Languages	📌 Proficient in <b>Java, SQL, Bash, C, C++, C#, .Net, Python, and JavaScript</b> . Experience with <b>Julia, Rust, and Go</b> .
Databases	📌 Skilled in database design and management using <b>SQL, MySQL, PostgreSQL</b> , and familiarity with NoSQL databases like <b>MongoDB</b> graph databases like Neo4j.
Software Development	📌 Experience with the full software development lifecycle, including requirements gathering, design, implementation, testing, and maintenance. <b>Agile</b> and <b>Scrum</b> methodologies.
Web Development	📌 Skilled in both front-end and back-end development. Comfortable with <b>React, Next.js, Remix, Tailwind, Angular, Node.js</b> , and RESTful API integration.
DevOps	📌 Practical experience with CI/CD pipelines using <b>Jenkins, Github Workflows, Docker, Kubernetes, AWS, and Azure</b> cloud services. Also have experience deploying and maintaining machine learning models ( <b>MLOps</b> ).
Machine Learning	📌 Proficient with the entire machine learning pipeline, from dataset development to model deployment. Experience with <b>PyTorch, TensorFlow, and Scikit-learn</b> .
Data Analysis	📌 Proficient in data manipulation and analysis with <b>Python (Pandas, NumPy, Matplotlib)</b> , <b>MATLAB</b> , and <b>R</b> .

## Experience

- 📌 **Research Scientist, SimulaMet** 2021 – present
  - Performed interdisciplinary research in AI for medical applications, focusing on algorithmic transparency.
  - Published 76 papers in reputable conferences and journals, accruing over 2,100 citations and an 26 h-index.
  - Organized 11 challenges and 4 workshops on ML, drawing over 500 international participants.
  - Supervised 10+ bachelor's students, 20+ master's students, and 2 PhD candidates.
- 📌 **CTO, Innsikt.AI** 2023 – present
  - Headed the development of Innsikt.AI for building virtual child avatars for law enforcement training.
  - Designed and implemented the core application built using React, Remix, Python, and PostgreSQL.
  - Led the development of custom LLMs used to model child-like behavior.
  - Contributed to securing funding from multiple sources, including venture capital, angel investors, and industry grants.
- 📌 **Associate Professor, OsloMet** 2023 – present
  - Developed ML solutions for diagnosing and treating musculoskeletal disorders.
  - Contributed to grant applications and research proposals.
  - Supervised student research in practical machine learning applications.
- 📌 **Data Scientist, ForzaSys** 2022 – 2023
  - Developed algorithms for automated soccer match video clipping and highlight generation using PyTorch and OpenCV.
  - Implemented a web-based tool using a Next.js tech stack for match-fixing detection, improving the detection accuracy of irregular betting activities.
- 📌 **Front-End Developer, DHIS2** 2017 – 2018
  - Enhanced table rendering capabilities, improving application performance and enabling larger table rendering.
  - Ported several applications from vanilla JavaScript to a modern web stack consisting of React and Redux.
  - Used Java Spring and worked closely with PostgreSQL to debug and optimize backend operations.
- 📌 **Full-Stack Developer, Axios AS** 2014 – 2016
  - Designed and implemented loan management software for a US mortgage company using C#, .NET, and Azure.

## Selected Projects

- 📌 **EndoNet, American Society for Gastrointestinal Endoscopy** 2023
  - Designed and implemented a system for collectiong and annotating colonoscopy data from various healthcare centers across the United States, enhancing data accessibility and analysis.
- 📌 **VALIDATE, European Union** 2023
  - Played a pivotal role in the VALIDATE project, focusing on Trustworthy AI and Clinical Model Development.
  - Responsible for tasks related to ethical use and reliability of AI in clinical settings.
- 📌 **Smittestopp, Simula Research Laboratory** 2020
  - Integral to the data science team for Norway's COVID-19 contact tracing app, Smittestopp.
  - Responsible for visualizing user movements, validating contact occurrences, and detecting transportation methods.
- 📌 **Fish Feeding, Spillfree Analytics** 2018
  - Developed machine learning algorithms for fish identification, automating feeding processes in aquaculture settings.
- 📌 **Nyss, Red Cross** 2018
  - Contributed to the initial development of Red Cross' disease prevention platform Nyss.

## Selected Projects (continued)

- 📌 **Data Store Application, DHIS2** 2017
  - Developed a JavaScript-based data management web application for the DHIS2 ecosystem at the University of Oslo.
  - Successfully integrated into the official DHIS2 platform, leading to part-time employment.
- 📌 **Subscription Application, DNB** 2017
  - Engineered a financial analytics tool to analyze online bank transactions.
  - Enabled social sharing features for subscriptions via Facebook.
  - Built using a React and Redux, interfaced with DNB's internal APIs.

## Activities

- 📌 **Member of the Educational Council, NORA** 2023 – present
  - Contributed to shaping the educational strategies and initiatives in AI across Norway as part of NORA's educational council.
- 📌 **Challenge Organizer, Various International Workshops** 2018 – present
  - Organized and led multiple challenges across reputable workshops such as ACM MultiMedia, ICPR, ImageCLEF, DLAMC, ICMR, and Nordic AI Meet.
- 📌 **Main Organizing Committee Member, MediaEval** 2018 – present
  - Part of the central organization of MediaEval, an annual international workshop gathering hundreds of participants.
  - Responsible for overseeing key aspects of the workshop, including program planning and speaker coordination.
- 📌 **Technical Program Committee Member, Various International Workshops** 2018 – present
  - Actively involved in the technical program committees for several high-profile conferences.
  - Venues include: ACM MM, ACM MM Asia, CBMS, ISMICT, MultiMediaEval, ICME, Scientific Reports, and Scientific Data.
- 📌 **Conference Organizer, Norwegian Artificial Intelligence Society (NAIS)** 2022
  - Contributed to organizing NAIS's annual conference held in Oslo, Norway.
  - Responsible for developing the website, participant outreach, and booking keynote speakers.
- 📌 **Editor, SIGMM Records** 2019 – 2023
  - Served as an editor for SIGMM Records, responsible for the interview section.
- 📌 **Journal Club Coordinator, OsloMet AI Club** 2019 – 2020
  - Initiated and coordinated a bi-weekly journal club for the AI Lab at OsloMet.
  - Responsible for booking speakers, coordinating time schedules, and engaging participants.

## Teaching

- 📌 **Master's Course Instructor, Big Data Curation, Pipelines, and Management (GRA 4157), BI Norwegian Business School** 2023
  - Instructed a master's course on machine learning and big data at BI Norwegian Business School.
- 📌 **Bachelor Course Instructor, Digital Technology (TK1101), Kristiania University College** 2020
  - Taught an undergraduate course on computer science basics for first-year students at Kristiania University College.
- 📌 **Examination Assessor, Data Science (INS301), Kristiania University College** 2019
  - Served as an examination assessor for a data science course at Kristiania University College.
- 📌 **Bachelor Course Instructor, Machine Learning (TEK300), Kristiania University College** 2019
  - Held an undergraduate course covering topics on general machine learning algorithms and deep learning.
- 📌 **Master Course Instructor, Emerging Technologies (MS340), Kristiania University College** 2019
  - Taught the master-level course on emerging technologies.
- 📌 **Examination Assessor, Introduction to Operating Systems (INF1060), University of Oslo** 2018
  - Served as an examination assessor for a course on operating systems.

## Education

- 📌 **Ph.D. Computer Science, Oslo Metropolitan University** 2018 – 2022
  - Focused on developing methodologies to improve transparency and interpretability in AI systems used in healthcare.
- 📌 **M.Sc. Computer Science, University of Oslo** 2016 – 2018
  - Developed a system for automatic report generation of endoscopy procedures with a focus on explainable AI.
- 📌 **B.Sc. Information Technology, University of Agder** 2012 – 2015
  - Developed a cross-platform mobile application for the Norwegian Seamen's Church using Ionic Framework.

## Miscellaneous

### Awards and Achievements

- 📌 **Winner of the 2021 Endoscopy Computer Vision Challenge**  
Recognized for developing a groundbreaking algorithm that significantly improves the accuracy and efficiency of endoscopic diagnostics.
- 📌 **Best of DDW ASGE**  
Awarded for innovative research that enhances the automation and precision of endoscopic report generation.
- 📌 **Best Paper Track** at the 17th International Conference on Content-Based Multimedia Indexing: Our paper on "*Semantic Analysis of Soccer News for Automatic Game Event Classification*" was distinguished for its novel approach to sports journalism, offering insights into automated content curation and analysis.
- 📌 **Most Innovative Approach** at the MultiMediaEval Benchmark 2018: Acknowledged for developing an exceptional multimedia tool that significantly advances the field, setting new standards for media analysis and evaluation.
- 📌 **Distinctive Mention** at DNB Hackathon, Oslo, Norway: Recognized for exceptional creativity and technical skill in developing solutions that address pressing financial industry challenges.