

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

Experience

- 📌 **Research Scientist, SimulaMet** 2021 – present
 - Led interdisciplinary research in AI for medical applications, focusing on algorithmic transparency.
 - Published 76 papers in reputable conferences and journals, accruing over 1,600 citations and an 24 h-index.
 - Organized 10 challenges and 4 workshops on ML, drawing over 500 international participants.
 - Supervised 10+ bachelor's students, 20+ master's students, and 2 PhD candidates.
 - Contributed to 10+ bachelor's students and 20+ master's students.
- 📌 **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, Python, and PostgreSQL.
- 📌 **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 by 200
 - 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.
- 📌 **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.

Selected Projects (continued)

- **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.
 - Played a key role in driving forward the agenda of integrating AI into broader educational frameworks nationally.
- **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.
 - Developed challenge themes, managed submission evaluation and ensured smooth operation of challenge sessions.
- **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 Course Instructor, Big Data Curation, Pipelines, and Management (GRA 4157), BI Norwegian Business School** 2023
 - Instructed the undergraduate course "TK1101 – Digital Technology."
- **Bachelor Course Instructor, Digital Technology (TK1101), Kristiania University College** 2020
 - Instructed the undergraduate course "TK1101 – Digital Technology."
- **Examination Assessor, Data Science (INS301), Kristiania University College** 2019
 - Served as an examination assessor for the "INS301 – Data Science" course.
- **Bachelor Course Instructor, Machine Learning (TEK300), Kristiania University College** 2019
 - Conducted the undergraduate course "TEK300 – Machine Learning."
- **Master Course Instructor, Emerging Technologies (MS340), Kristiania University College** 2019
 - Taught the master-level course "MS340 – Emerging Technologies."
- **Examination Assessor, Introduction to Operating Systems (INF1060), University of Oslo** 2018
 - Served as an examination assessor for "INF1060 – Introduction to 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.