

SREENATH KYATHANAHALLY, Ph.D.



AI Innovation leader

📅 07 Mar 1989 🇮🇳 Indian 🇨🇭 Swiss - C permit 📍 Zurich, Switzerland
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📄 sreenath-p-kyathanahally-038b36140/ 🎓 Google scholar

PROFESSIONAL SUMMARY

- AI Innovation Leader at IKEA with 10+ years developing and deploying machine learning and computer vision systems.
- Experience working on generative AI systems including Multimodal RAG-based applications, agentic approaches, and Edge AI deployments (e.g., NVIDIA Jetson).
- PhD in Biomedical Engineering and M.S. in Electrical & Computer Engineering (USA).
- Research background with publications and grant-funded projects bridging academia and industry.

EXPERIENCE

AI Innovation leader / AI Technology Lead

AI Innovation Lab, IKEA

📍 Pratteln, Switzerland 📅 July 2024 – Present

- Lead AI projects and mentor a team of data scientists, ensuring high technical standards, alignment with IKEA values, and robust data strategies.
- Architect and deploy advanced computer vision applications, optimizing models using TensorRT and ONNX for high performance, and building interactive UIs with PyQt6.
- Steer the strategic direction for Generative AI initiatives, advising the data science team on the conceptualization and architecture of Agentic AI and Multimodal RAG pipelines.
- Architecting proof-of-concept Edge AI pipelines using Balena to manage, monitor, and deploy localized LLMs (Google Gemma) to Nvidia Jetson Nano hardware.
- Utilize the Databricks ecosystem extensively for scalable AI solutions, leveraging Unity Catalog for data governance, Databricks Genie, and distributed model training.
- Implement Stable Diffusion models for synthetic image creation, enriching datasets for downstream computer vision initiatives.
- Collaborate closely with business and IT teams to translate complex needs into innovative AI solutions and integrate them seamlessly into the broader IKEA system.

Senior AI Engineer

b-rayZ

📍 Zurich, Switzerland 📅 Jun 2023 – Jun 2024

- Developed medical imaging AI models for segmentation and classification using **PyTorch**, **TensorFlow**, and **YOLO**.
- Built scalable data pipelines and infrastructure using **MongoDB**, **SQL**, and cloud platforms for large medical datasets.
- Implemented automated ML workflows and **CI/CD pipelines** for reliable model deployment.
- Conducted exploratory data analysis to support model development and performance improvements.
- Mentored engineers and ensured compliance with regulated **medical device** development standards.

SKILLS



Generative & Agentic AI

Multimodal RAG, LLM Agents, NL2SQL, Stable Diffusion, Google Gemma



Edge AI & IoT

Nvidia Jetson, Balena, TensorRT



Deep Learning

TensorFlow, PyTorch, Keras



Computer Vision

YOLO, SegFormer, Mask2Former, OpenCV, Image Segmentation



MLOps & Deployment

Docker, Weights & Biases



Cloud & Data Platforms

Amazon AWS, Microsoft Azure, Databricks



UI & Web Development

PyQt6, Flask, tkinter



Data Engineering

SQL, MongoDB, NumPy, Pandas, Scikit-learn



Programming Languages

Python



Medical Imaging

MRI, CT, PET

AWARDS AND HONORS



IRP Research Grant – Zurich

Co-applicant – CHF 150k competitive research grant (2020–2023)



Magnetic Resonance in Medicine Journal

Top Downloaded Author (2019) & Co-Author (2022)



ISMRM – International Society for Magnetic Resonance in Medicine

Summa Cum Laude Merit Award (2013); Magna Cum Laude Merit Award (2014, 2015); Educational Stipend (2013–2015)

Machine Learning Researcher (Full-time → Part-time Collaboration)

ETH / Eawag

📅 Zurich, Switzerland 📍 Sep 2020 – Dec 2023

- Transitioned from full-time research role to part-time collaboration while working in industry.
- Developed deep learning systems including **GANs**, **Vision Transformers**, and transfer learning methods for plankton classification.
- Applied advanced **data augmentation** and noise characterization to improve model robustness.
- Collaborated with interdisciplinary researchers and published work in leading ML and ecology venues.

Senior Deep Learning Engineer (Part-time initially)

HiD-Imaging

📅 Zurich, Switzerland 📍 Feb 2022 – May 2023

- Developed deep learning pipelines for cardiac CT segmentation using the **MONAI** framework.
- Built clinical AI systems supporting real-time medical image analysis.
- Worked within regulated healthcare development environments following **QMS** standards.

Computer Vision Scientist

Qualysense AG

📅 Zurich, Switzerland 📍 Dec 2019 – Aug 2020

- Developed machine learning models for computer vision applications in agricultural product classification.
- Built scalable and maintainable ML codebases within Agile/Scrum development environments.

Postdoctoral Researcher – Medical Imaging AI

Balgrist Hospital

📅 Zurich, Switzerland 📍 Nov 2017 – Nov 2019

- Developed deep learning models for spinal cord lesion segmentation from medical imaging data.
- Investigated neuroimaging biomarkers related to pain in spinal cord injury patients.
- Conducted longitudinal brain imaging studies combining structural and microstructural analysis.

Research Scholar – Medical Imaging ML

École Polytechnique de Montréal

📅 Montreal, Canada 📍 Aug 2018 – Sept 2018

- Built machine learning pipelines for spinal cord lesion segmentation using Python and TensorFlow.
- Applied transfer learning to improve performance on limited medical imaging datasets.

Early Stage Researcher – Marie Curie ITN

Inselspital Bern

📅 Switzerland 📍 Sep 2013 – Aug 2017

- Developed machine learning methods for analysis of brain tumor MR spectroscopy data.

🏆 **École Polytechnique Montréal**
Research Travel Grant, CHF 4k (2018)

🏆 **University of Bern**
2nd Prize – SLAM Competition (2016)

🏆 **Auburn University**
Graduate Assistantship and Fellowship
(USD 65k total), 2011–2013

EDUCATION

Doctor of Philosophy: Biomedical Sciences/Engineering

University of Bern

📅 Sept 2013 – Aug 2017

Thesis: Quality Aspects of Clinical Magnetic Resonance Spectroscopy: Quantification Issues, Quality Prediction, and Quality Assessment by Machine Learning

Master of Science: Electrical and Computer Engineering

Auburn University

📅 Aug 2011 – Aug 2013

Thesis: Blind Source Separation Methods for Analysis and Fusion of Multimodal Brain Imaging Data

Bachelor of Engineering: Electronics and Communication Engineering

Visvesvaraya Technological University

📅 Sept 2007 – June 2011

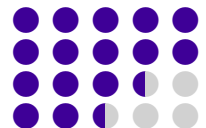
Thesis: Real-Time Industrial Production Counter using Arduino Microcontroller

CERTIFICATIONS

🏆 **MLOps Platforms**
Amazon SageMaker and Azure ML, Coursera, Issued Jun 2023, Credential ID Z6GW8K9TPSV7

LANGUAGES

English
Kannada
Hindi
German



- Applied CNNs and autoencoders to remove artifacts and improve spectral data quality.
 - Built tools for quality prediction and assessment of clinical MR spectroscopy datasets.
 - Developed a Java plugin for the jMRUI platform used in medical spectroscopy research.
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Marie Curie ITN Secondment

Universitat Autònoma de Barcelona

📅 Spain

📍 Dec 2014 – Feb 2015

- Applied machine learning methods including SVM, Random Forest, and RUSBoost for brain tumor classification.
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Graduate Research Assistant

Auburn University MRI Research Center

📅 Auburn, AL, USA

📍 Sep 2011 – Aug 2013

- Applied signal processing techniques (ICA, PCA, denoising) to fMRI and EEG data.
- Integrated multimodal neuroimaging data to improve spatial and temporal analysis of brain activity.
- Performed statistical analysis and visualizations for publications and conferences.