SREENATH KYATHANAHALLY

AI Technology Lead

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EXPERIENCE

AI Technology Lead

AI Innovation Lab, IKEA

Pratteln, Switzerland — July 2024 – Present

- Lead AI projects across the organization, ensuring high technical standards and alignment with IKEA values.
- Manage and mentor a team of data scientists, analysts, and researchers, fostering collaboration and skill development in AI technologies.
- Drive the AI lab's progress by creating, developing, and implementing AI solutions for complex business issues.
- Develop and execute the AI research plan, working with senior leadership to shape the organization's data strategy.
- Stay updated with AI advancements, exploring new technologies for potential use in IKEA's innovation efforts.
- Collaborate closely with different teams to integrate AI into the IKEA system, ensuring insights from AI projects are well-utilized.
- Work with business and IT teams to understand their needs and apply innovative AI solutions.

Senior AI Engineer

b-rayZ

Zurich, Switzerland — June 2023 – June 2024

- Assemble large, complex medical datasets for AI models.
- Implement process improvements for automation and scalability.
- Build infrastructure for data extraction and loading using Mongo, SQL, and Cloud.
- Develop AI algorithms for medical image segmentation and classification using TensorFlow and PyTorch.
- Implement YOLO-v8 based object detection and segmentation for medical images.
- Conduct data exploration and analysis to derive insights for model development.
- Maintain pipelines for continuous integration and deployment.
- Mentor team members on efficient AI development.
- Ensure compliance with medical device standards.

Machine Learning Researcher - Scientist FS8

ETH, Eawag

Zurich, Switzerland — Sep 2020 – Dec 2023

- Develop deployable deep learning algorithms, including GANs, for plankton classification.
- Use transfer learning and data augmentation techniques, characterizing noise, to improve model generalization.
- Collaborate with domain experts to understand and address ecological implications of plankton classifications.
- Implement vision transformers for efficient and scalable image processing.

SKILLS

- **Deep Learning** — TensorFlow, PyTorch, Keras
- **Computer Vision** — OpenCV, Pillow
- **Web Development** — Flask
- **Data Manipulation and Analysis** — NumPy, Pandas
- **Machine Learning** — Scikit-learn
- **Cloud Platforms** — Amazon AWS, Microsoft Azure
- **Database Management** — SQL, MongoDB
- **Programming Languages** — Python, MATLAB, HTML
- **Version Control** — Git
- **Containerization** — Docker
- **Medical Imaging** — MRI, CT, PET
- **Agile Management** — JIRA, Asana
- **Image Registration** — Spatial and Temporal registration
- **Object Detection** — YOLO, Faster R-CNN, SSD
- **Image Processing** — Image enhancement, Image restoration, Image segmentation
- **Model Tracking** — Weights and Biases
- **Development Tools** — Visual Studio, Eclipse, VS Code

AWARDS AND HONORS

- **IRP Research grant, Zurich, Switzerland** — co-applicant, 150k CHF, 2020-23
- **Magnetic Resonance in Medicine journal** — Top downloaded co-author, 2022
- **Magnetic Resonance in Medicine journal** — Top downloaded author, 2019
- **Ecole Polytechnic, Montréal, Canada** — Research travel grant, 4k CHF, 2018

- Publish research findings in top-tier machine learning and ecology venues.

Senior Deep Learning Engineer

HiD-Imaging

Zurich, Switzerland | Feb 2022 – May 2023

- Develop deep learning algorithms for medical imaging.
- Utilize heart atlas based training for cardiac image segmentation.
- Annotate and segment CT images to improve AI model accuracy.
- Adhere to Quality Management System (QMS) requirements.
- Support cloud-based AI algorithms for real-time analysis.
- Foster collaboration and knowledge sharing within the team.

Computer Vision Scientist – ML on Computer Vision

Qualysense AG

Zurich, Switzerland | Dec 2019 – Aug 2020

- Developed state-of-the-art machine learning algorithms for computer vision problems, such as classifying Soybeans and Corn based on certain features.
- Maintained modular, scalable, and sustainable code following Scrum Agile methodologies.

Postdoctoral Researcher - ML Tools for Medical Images

Balgrist Hospital

Zurich, Switzerland | Nov 2017 – Nov 2019

- Developed deep learning algorithms for segmenting spinal cord lesions using medical images.
- Investigated neuro-imaging biomarkers responsible for pain in spinal cord injury patients.
- Conducted longitudinal studies to analyze structural and microstructural changes in the brain of spinal cord injury patients.

Research Scholar - ML Tools for Medical Images

Ecole Polytechnic

Montreal, Canada | Aug 2018 – Sept 2018

- Implement a machine learning pipeline for automatic lesion segmentation in spinal cord images using Python and TensorFlow.
- Utilize transfer learning techniques to improve the performance of lesion segmentation models on limited annotated data.

Early Stage Researcher - Marie-Curie ITN - ML Tools for Time Domain Data

AMSM, University of Bern

Switzerland | Sept 2013 – Aug 2017

- Develop machine learning tools and classifiers to analyze brain tumor spectra and assist radiologists in interpreting data.
- Implement deep learning networks, including CNNs and autoencoders, to remove artifacts and improve the quality of MR spectra.
- Research and develop methodologies to predict and assess the quality of clinical MR spectra data.
- Develop a JAVA plugin for the jMRUI tool, enhancing its functionality and usability for medical image analysis.

University of Bern, Switzerland
2nd prize in SLAM competition, 2016

ISMRM
Educational stipend award, 2013, 2014, 2015

ISMRM
Magna Cum Laude merit award, 2014 2015

ISMRM
Summa Cum Laude merit award, 2013

Auburn University, USA
Graduate Assistantship Award, 45k USD, 2011-13

Auburn University, USA
Graduate Fellowship Award, 20k USD, 2011-13

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

Exploratory Data Analysis for Machine Learning
Coursera, Issued May 2023, Credential ID WYGX5S8XXU56

Supervised Machine Learning: Regression
Coursera, Issued May 2023, Credential ID 4348E3DTY9C9

Early Stage Researcher Marie-Curie ITN Secondment

Universitat Autónoma de Barcelona

Spain | Dec 2014 – Feb 2015

- Acquire and apply basic machine learning skills to classify brain tumor spectra using RUSBOOST, SVM, and Random Forest algorithms.

Graduate Research Assistant

AU MRI Research Center

Auburn, AL, USA | Sept 2011 – Aug 2013

- Apply signal processing techniques (denoising, ICA, PCA) to remove noise and motion artifacts from fMRI and EEG data.
- Integrate fMRI and EEG data to enhance spatial and temporal resolution for more precise brain activity analysis.
- Conduct statistical analysis and generate visualizations for research papers and conference presentations.

Bachelors Thesis: Real-Time Industrial Production Counter

Bosch

Bangalore, India | January 2011 – June 2011

- Develop an improved counter using Arduino microcontroller board for efficient assembly line production monitoring.
- Design and implement control algorithms to synchronize the counter with the assembly line system.

Internship

Data Care Systems Pvt. Limited

Bangalore, India | July 2010 – Oct 2010

- Design an LCD Timer handheld device using PIC microcontroller assembly language programming.
- Develop firmware for the device to accurately measure and display time.

Fundamentals of Machine Learning in Finance
Coursera, Issued Apr 2020, Credential ID VYY9NJJ46HYJ

Guided Tour of Machine Learning in Finance
Coursera, Issued Apr 2020, Credential ID BA4HXMXLCDMC

Introduction to Computer Vision with Watson and OpenCV
Coursera, Issued Apr 2020, Credential ID 87UHBWQTGZAE

SQL for Data Science
Coursera, Issued Apr 2020, Credential ID 2TK6RL9YNE4X

Data Science in Stratified Healthcare and Precision Medicine
Coursera, Issued Apr 2020

LANGUAGES

English
Kannada
Hindi
German

A TYPICAL DAY