

# SREENATH KYATHANAHALLY

## Senior AI engineer

📅 07 Mar 1989    🇮🇳 Indian    🇨🇭 Swiss - C permit    @sreenath.kyathanahally@gmail.com  
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📄 sreenath-p-kyathanahally-038b36140/    🎓 Google scholar



## EXPERIENCE

### Senior AI Engineer

#### b-rayZ

📍 Zurich, Switzerland    📅 June 2023 – Present

- 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.

### 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.

### Machine Learning Researcher - Scientist FS8

#### ETH, Eawag

📍 Zurich, Switzerland    📅 Sep 2020 – Present

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

### Computer Vision Scientist – ML on Computer Vision

#### Qualysense AG

📍 Zurich, Switzerland    📅 Dec 2019 – Aug 2020

## 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 author, 2018-19
- 🏆 **Ecole Polytechnic, Montréal, Canada**  
Research travel grant, 4k CHF, 2018
- 🏆 **ISMRR**  
Educational stipend award, 2013, 2014, 2015

- 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 Initial Training Network - 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.

## Early Stage Researcher Secondment

### Universitat Autònoma 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.



### 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



### University of Bern, Switzerland

2nd prize in SLAM competition, 2016

## 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



### Fundamentals of Machine Learning in Finance

Coursera, Issued Apr 2020, Credential ID VYY9NJJ46HYJ

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## 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.

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## Internship

### Data Care Systems Pvt. Limited

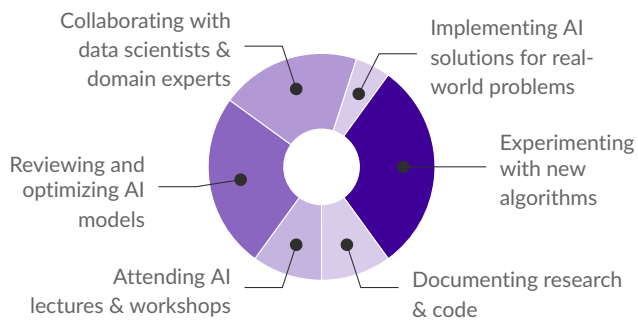
📅 Bangalore, India

📍 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.

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## A TYPICAL DAY



### 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

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## LANGUAGES

English  
Kannada  
Hindi  
German

