

Harish Kumar Shivaramappa

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EDUCATION

University of Pavia / Masters
Electronics and Computer Science

Pavia, Lombardia, Italy
Dec/2020 - Dec/2022

PES University / Batchelors
Electronics and Communication Engineering

Bengaluru, Karnataka, India
July/2016 - March/2019

SJ Polytechnic / Diploma
Electronics and Communication Engineering

Bengaluru, Karnataka, India
April/2013 - March/2016

TECHNICAL SKILLS

Programming Languages: Python, JavaScript, C

Libraries and Tools: tensorflow, Sklearn, Pandas, Numpy, Git, Docker, Scapy, nltk, Scipy, Seaborn, YAML

ML Architectures: CNN, Transformers(BERT, LSTM, GRU), GANs, Seq2Seq

GUI/Rest API: PyQt, Flask, Fast API, Django

WORK EXPERIENCE

Software Application Engineer

Inventvm Semiconductor Srl, Lombardia, Italy

Jan/2022 - Current

- Responsible for developing full-fledge **Semiconductor Chips Data Analysis/Collection Software Platform** for application and validation engineers. This includes owning complete project and *creating distributed Data pipeline, Data visualization/Analysis GUIs*. Most notable project in the organization is [Franco](#) which is power and audio application, where i have been software team lead to develop *end-end ML/Data project* for audio application.

Application Engineer

Analog Devices Inc, Karnataka, India

Jan/2019 - July/2020

- ADI is an estimated institution that offered me an opportunity to handle several projects over a period. I can recall a few notable projects from the organization, CBM (Condition-based Monitoring) for windmills, Burnside California state forest wildfire protection with IoT application, Developing the python-based test bench for wireless product evaluation, and supporting post silicon evaluation for WBMS(wireless BMS) chips. Daily tasks include resolving customer queries related to wireless network hardware from China and the European region.

OPEN SOURCE PROJECTS

- **Movie Recommendation : NLP -**, EDA performed on raw tmdb movies dataset, text preprocessing applied on movies description, crew, audience feed back etc... vectorized the text with help of TFIDF Transformers and LSTM/cosine similarity models employed to find the similar movies based on audience input. Frontend of the Application developed with streamlit and deployed in heroku. [GitHub](#)
- **Sentiment Analysis : ML/NLP -**, Sentiment Analysis mainly performed on the twitter-tweets/Amazon/movies public reviews with different context positive/negative, covid, hired, the most challenging task is scraping the data and performing EDA. Sentiment analysis mainly from NN's and ML algorithms. [GitHub](#)
- **Complete Life Cycle of ML Project**, This is MLOps template project, where i had integrated different technologies - setup tools, sklearn, Flask, YAML, Docker, MlFlow, CI-CD, kubernetes and GCP/AWS [GitHub](#)

THESIS/PUBLICATIONS

- **Master Thesis (Jan/2022 - Dec/2022) - SoC and SoH estimation for Li-Ion Batteries with Neural Networks and Statistical Methods** Determining the SOC and SOH of the Li-Ion batteries by employing the Conventional Coulomb count method and sophisticated Kalman filter algorithms(UKF, EKF, AUKF and AI/ML) in a wireless communication network(BLE), , [Link](#)
- **Batchelors Thesis (Jan/2019 - Aug/2019) - Robotic Arm Control Using Haptic Glove**, Controlling Haptic Glove actuation prediction with realtime Temperature, pressure and vision data. Pretrained Huge NN model incorporated in micro-controller(raspberry pi 3), and realtime data pipelined/uploaded to database. Batch training is done based on object detection accuracy. [Link](#)
- **Diploma Thesis (Sep/2015 - April/2016) - 3 Axis CNC PCB Milling Machine**, The objective is to build a low-cost high precision(3mm) 3-axis PCB milling machine, which can support manual and advanced G-code., , [Link](#)