Harish Kumar Shivaramappa

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EDUCATION

University of Pavia / Masters — **Pavia, Lombardia, Italy**
Electronics and Computer Science — *Dec/2020 - Dec/2022*

TECHNICAL SKILLS

Programming Languages: Python, JavaScript, C
Libraries and Tools: tensorflow, Sklearn, Pandas, Numpy, Scapy, nltk, Scipy,Seaborn, YAML
ML Architectures: CNN, Transformers(BERT, LSTM, GRU), GANs, Seq2Seq
GUI/Rest API: PyQt, Flask, Fast API, Django
MlOps/Devops : MlFlow, github, github actions, gitea, Docker, Jenkins, Yaml scheme, prometheus, grafana,
Database : AWS - EC2, S3 sagemaker, GCP

OPEN SOURCE PROJECTS

- **MlOps/AIops Teaching assitant Oct/2023 -**, Teaching assitant/lab tutor in private University, my responsiblities include to develop teaching material for mlops course from basics to experti and assist students with lab experiments. Here i have complete repository of teaching material mlOps - repo from packaging Ml app - CI-CT-CD pipeline to deploying .
- **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/cosnie similarity models employed to find the similar movies based on audinece input. Frontend of the Application develpoed with streamlite 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 challenging task is to scrape data from opensource web, creating custom dataset and performing EDA. NN's and Ml algorithms employed to perform Sentiment analysis. GitHub
- **Complete Life Cycle of ML Project**, This is MlOps template project, where i had integrated different technologies - setuptools,sklearn,Flask,YAML,Docker,MlFlow,CI-CD,kubernetes and GCP/AWS End to End Ml

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 noteable project in the organization is Franco which is power and audio application, where i have been software team lead to develope ***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 products parametric 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.

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 ad SOH of the Li-Ion batteries by employing the Conventional Coloumb countmethod 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 vission data. Pretrained Neural Networks (NN) model incorporated in micro-controller(raspberry pi 3), and realtime data piplined implemented with 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