SARATH M

Machine Learning Engineer

sarathm00@gmail.com | +91 9496354518 | Saranya House, North Paravoor P.O, 683513 | Kerala, India
SarathM1

EXPERIENCE

Specialist
Tata Elxsi
July 2016 – Ongoing | Technopark, Trivandrum

Embedded System Engineer
Unisync Technologies
Jan 2015 – July 2016 | Vyttila, Ernakulam

MOST PROUD OF

My Professional Achievement
Awarded the highest rating "Outstanding" in three consecutive appraisal cycles in Tata Elxsi

My Academic Achievement
Final year academic project "Hexapod" was selected for the finals in State level competition

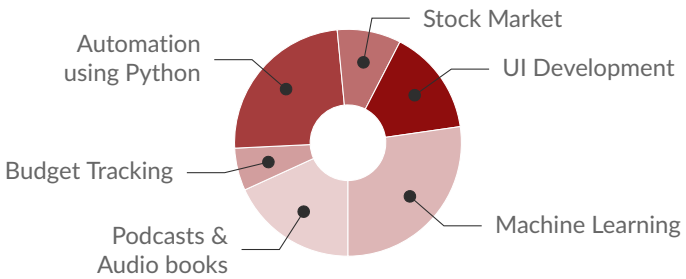
Martial Arts
Black Belt holder in Shito-Ryu style of Karate

EDUCATION

Course in Embedded Systems
Vector India Institute, Bangalore, Karnataka
2014

B.Tech (ECE)
Govt. College of Engineering Cherthala,
Cochin University Of Science and Technology, Kerala
2010 - 2014

INTERESTS



MY LIFE PHILOSOPHY

"Quality is not an act; it is a habit."

STRENGTHS

Team Player | Passionate Programmer | Fast Learner | Hard-working | Eye for detail

SKILLS

- Machine Learning Frameworks
  - Tensorflow
  - Scikit-learn
  - NLTK
- Visualization & Data Processing
  - Pandas
  - Numpy
  - Flask
  - Bokeh
  - Plotly
  - Grafana
  - Twitter Bootstrap
  - PyQt4, Qt Designer
- Distributed Systems
  - ROS
  - Paho MQTT
  - Redis
  - Apache Kafka
- Test Automation & CI
  - Jenkins
  - Robot Framework
- Devops
  - Docker
  - Ansible

LANGUAGES

English
Malayalam
Hindi

PROJECTS

ADAS features for Autonomous Vehicle project

Role: Project Lead

Responsibilities:

- Development of Object detection system using Convolutional Neural Networks
  - Faster-RCNN, Yolo V2, Single Shot Detectors
- Development of Drivable Area using Image Segmentation
  - SegNet, Mask R-CNN
- Design and development of Distributed System using Robotic Operating System (ROS)
- Testing and deployment of the ML model in NVidia Jetson TX1 platform
- Object detection in 3D Point cloud data using PointNet

Lidargen

Role: Project Lead

Responsibilities:

- The User is given the freedom to place and orient the multiple meshes
- Used in the optimized placement of multiple Lidar's to reduce blind spot
- To mathematical model the behavior of Lidar and simulate the same using Ray Casting.
- A UI capable of 3D visualization was created using Qt and ROS RViz

Intelligent Battery Management System

Role: Project Lead

Responsibilities:

- Implemented Neural Network Regression model as a benchmark
- Implemented LSTM models to improve upon the benchmark results
- Supported in development of 'Digital Twin' of a cell with ML models mimicking the electrochemical characteristics
- Developed a POC on Anomaly detection algorithm to demonstrate online-learning capabilities of the framework
- Create a Data dashboard for monitoring sensor data in real-time using Flask and Bokeh

Natural Language Processing for JIRA ticket Analytics

Role: Project Lead

Responsibilities:

- Data cleaning and Exploratory Data Analysis using NLTK
  - Remove stop words and Stemming the corpus
  - Named Entity Recognition using Spacy
  - Visualizations using Word Cloud
- Search and filter feature using BERT model and Elasticsearch
  - Converting each ticket into fixed length vector using BERT
  - Save the vectors into Elasticsearch
  - Use Cosine Similarity to compare and filter tickets

Automated Testing and CI Framework

Role: Project Lead

Responsibilities:

- Enables rapid and Automated testing
- The framework supports both SIL and HIL testing
- Continuous Integration using Jenkins, Ansible and Robot framework
- Centralized Logging using Fluentd, Elasticsearch and Kibana
- Containerization using Docker