

SARATH M

Machine Learning Engineer

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📍 Kerala, India

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

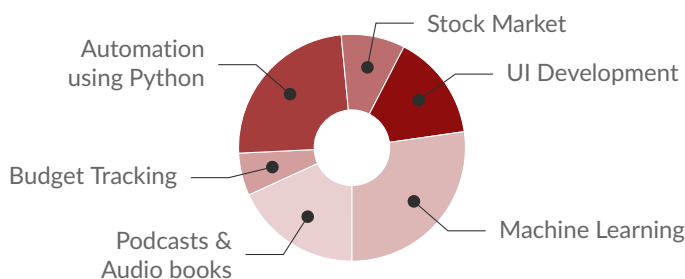
B.Tech (ECE)

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

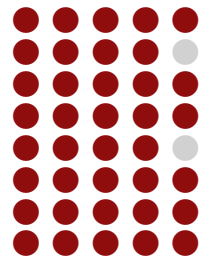
Machine Learning Frameworks

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: Module Owner

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:

- Develop a tool to emulate LIDAR using mathematical model
- Use ray-casting to generate point cloud data
- Developed 3D visualization using Qt and ROS RViz

Intelligent Battery Management System

 Role: Module Owner

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:

- Develop a framework that enables rapid and Automated testing
- The framework should support both SIL and HIL testing