

Vaishak Melarcode Kallampad

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San Jose, CA

EDUCATION

- **San Jose State University, San Jose, CA** **Aug 2021 – Dec 2023**
Masters , Software Engineering
- **Government Rajiv Gandhi Institute of Technology, Kerala, India** **Aug 2014 – Jun 2018**
Bachelor of Technology in Electronics & Communication Engineering

WORK EXPERIENCE

- **Boson Motors Inc, Livermore, United States** **Jun 2022 – Aug 2022**
Software Engineering Intern – Data Engineer
 - Set up Data Pipeline to collect and store data from CAN bus and ROS topics into InfluxDB automatically.
 - Developed Subscriber and Publisher model to analyze ROS topics from vehicle and control it remotely.
 - Tested and improved autopilot feature using Grafana to visualize data, detect anomalies and devise real-time alerts.
 - Wrote scripts to automatically stop the vehicle on losing its prescribed path in autonomous mode.
- **Tata Consultancy Services Ltd, Bangalore, India** **Nov 2018 – Jun 2021**
Software Engineer
 - Designed and tested signaling systems particularly Automatic Train Control systems (ATC) for metro rails.
 - Automated safety critical testing deploying Python scripts and thereby reduced ~5 man-days work per project .
 - Performed data analysis to optimize design / plan of metro track layouts and cut down costs encountered by ~23%.

CERTIFICATIONS

- **Machine Learning** - authorized by Stanford University from Coursera

SKILLS

- **Backend:** Python , C++ , Java , PHP , NodeJS , ExpressJS
- **Frontend:** HTML , CSS, JavaScript
- **Database:** MySQL, Microsoft SQL, PostgreSQL , InfluxDB, MongoDB ;
- **Frameworks/Tools:** REST API , Junit , jQuery , Microservices , Agile , Scrum , Docker , Linux, ROS , AWS ;
- **Artificial Intelligence:** Regression, Decision trees, SVM, KNN, K-Means Clustering, NLP, TensorFlow, PyTorch, OpenCV, YOLO, YOLACT, GANs, Transformers.

COURSEWORK

- Fall 2021 – Enterprise Software Platforms, Operating Systems, Object Oriented Programming (OOPs)
- Spring 2022 – Database Systems, Data Mining, Machine Learning, Cloud Technologies.
- Fall 2022 – Deep Learning, Software Systems Engineering – Design Patterns
- Spring 2023 – Enterprise Distributed Systems, Reinforcement Learning

ACADEMIC PROJECTS

- **Barks & Meows** **Aug 2021 – Dec 2021**
An interactive website for a cafe exclusively for pet lovers. Functionalities include Signup/Login, advertising product details using APIs, tracking visited pages using Cookies.
- **Spartan Quality Assurance Toolkit** **Feb 2022 – May 2022**
A test case and bug management toolkit revolves around streamlining the entire process of testing, primarily for managers, developers, test leads and testers. Designed the database for this app.
- **Ted Talk Recommender** **Feb 2022 – May 2022**
Designed a recommender system with Ted Talk transcripts and related tags for ted talk. Predicted and displayed as recommendation 5 most similar talks based on a given Ted talk.
- **Autonomous Vehicle Rental System** **Feb 2022 – May 2022**
A ride-hailing platform for Autonomous Vehicles. Simulated autonomous ride using CARLA. Web application was created in MERN stack and deployed on AWS-EC2 with Elastic Load Balancer.
- **Music Artist Identification** **Feb 2022 – May 2022**
Build a deep learning model to identify song artist using MFCC features. Created own training data from scratch and tried different architectures - ANN, CNN and RNN(LSTM) models.
- **Dog Breed Identifier** **Aug 2022 – Dec 2023**
Deep Learning model to identify 133 different breeds of dogs in real-time. Has been built using transfer learning on 4 different models - VGG19, Resnet50, InceptionV3 and Xception.