Vaishak Melarcode Kallampad

linkedin.com/in/vaishak-kallampad **|** github.com/vaishakmk
vaishak.m.kallampad@gmail.com | (650) 880-5495 | San Jose, CA, 95113

Education

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

Work Experience

Boson Motors Inc, Livermore, United States   June 2022 – Aug 2022
Software Engineering Intern – Data Engineer

- Familiarized and got hands-on experience in testing the autopilot feature for self-driving vehicles.
- Set up the Data Pipeline to collect and store data from CAN bus and ROS topics into InfluxDB automatically.
- Created ROS nodes both Subscriber and Publisher to analyze the ROS topics from the vehicle and control it remotely.
- Used Grafana to visualize the data from InfluxDB, detect anomalies and created real-time alerts to avoid it.

Tata Consultancy Services Ltd, Bangalore, India   Nov 2018 – Jun 2021
Software Engineer

- Provided Design support to Alstom Transport in the verification of their Automatic Train Control (ATC) system through various data analytic processes.
- Automated safety critical testing using Python and thereby reduced the man-days required for the job.
- Optimized the design and plan of metro track layouts for installation of equipment effectively and reducing the total costs encountered. Worked for Metro projects from Panama, Toronto, Singapore, Lyon and Riyadh.

Certifications

- Machine Learning - authorized by Stanford University from Coursera

Skills

Backend: Python, C++, Java, PHP; **Frontend:** HTML, CSS, JavaScript, React
Database: MySQL, Microsoft SQL, PostgreSQL, InfluxDB **; Frameworks and Libraries:** NodeJS , REST API, JUnit, jQuery**,** Microservices, Agile, Scrum, Docker**; Operating Systems:** Linux, ROS ; **Cloud:** AWS **; Machine Learning:** Traditional ML algorithms, NLP, TensorFlow, PyTorch, OpenCV, YOLO, YOLACT, GANs, Transformers.

Coursework

- Fall 2021 – Enterprise Software Platforms, Operating Systems, Object Oriented Programming (OOPS), Data Structures and Algorithms.
- 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** : An interactive website for a café exclusively for pet lovers. Functionalities include Signup/Login, displaying product details using APIs, tracking visited pages using Cookies. Used MySQL as database.
- **Ted Talk Recommender** : Created a recommender system using Ted Talk transcripts and related tags for the talk. Predicted and displayed the five most similar talks based on a given Ted talk.
- **Airport Management System** : Developed a MERN stack application for flight passengers, airport, and airline employees. The services included scheduling and displaying upcoming flights, assigning terminal/gates, and baggage carousel and managing conflicting assignments.
- **Autonomous Rental Vehicle** : A vehicle rental system allowing users to check available autonomous vehicles and book rides. Simulated the autonomous ride using CARLA. Used AWS-RDS and MongoDB for storing all the related data and Elastic Load Balancer to manage the network traffic. The application was deployed using AWS-EC2 instance.
- **Music Artist Identification** : Build a model to identify song artist using MFCC features. Created own training data from scratch and tried different architectures like ANN, CNN and RNN(LSTM) models.
- **Dog Breed Identifier** : Performed transfer learning and did comparative study of various state-of-the-art vision models including VGG19, Resnet, InceptionV3 and Xception to identify 133 different dog breeds in real-time.
- **Credit Card Reader** : A java application that handles and processes different types of credit cards. Used various design patterns to efficiently validate and process the card inputs from different file formats including csv, xml and json.