Vaishak Melarcode Kallampad

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

EDUCATION

- **San Jose State University, San Jose, CA**   **Aug 2021 – Dec 2023**
  Masters , Software Engineering
  Relevant Coursework - Enterprise Software Platforms, Operating Systems, Object Oriented Programming (OOPs), Database Systems, Data Mining, Machine Learning, Cloud Technologies , Deep Learning, Software Systems Engineering – Design Patterns , Enterprise Distributed Systems, Reinforcement Learning

- **Government Rajiv Gandhi Institute of Technology, Kerala, India**   **Aug 2014 – Jun 2018**
  Bachelor of Technology in Electronics & Communication Engineering
  Relevant Coursework – Digital Image Processing, Digital Communication Techniques, Neural Networks, Computer Architecture and Processing

---

WORK EXPERIENCE

Western Digital Corporation, Milpitas, United States   **Jun 2023 – Dec 2023**
System Design Verification Engineering Intern
- Developing command-based testing framework in python making test development flexible and robust.
- Developing new tests for testing PCIe/NVMe SSDs based on predefined Engineering specifications.
- Conducting first-level triage, troubleshooting, bug logging, and followed up with cross-functional teams to drive bug closure.
- Monitoring qualification cycles and ensuring adherence to testing protocols.
- Utilized Python programming to create targeted tests simulating hot swap and glitch situations on SSDs.

Boson Motors Inc, Livermore, United States   **Jun 2022 – Aug 2022**
Software Engineering Intern – Data Engineer
- Set up Data Pipeline and ETL infrastructure to collect and store ~2gb data/day from CAN bus and ROS topics into InfluxDB automatically.
- Created scripts for compressing 2-3 GB data to ~10-50 MB csv files for regular backup purpose.
- Developed Subscriber and Publisher model to analyze ROS topics from vehicles and automatically stop the vehicle on deviating more than 5m from its prescribed path in autonomous mode.
- Tested and improved autopilot feature using Grafana to visualize data, detect anomalies and devise real-time alerts.

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 tasks deploying Python scripts and thereby reduced ~5 man-days work per project .
- Performed data analysis to optimize design 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, Kafka, jQuery**,** Microservices, Agile, Docker**,** Linux, ROS, AWS, Hadoop
- **Artificial Intelligence:** Regression, Decision trees, SVM, KNN, K-Means Clustering, NLP, TensorFlow, PyTorch, OpenCV, YOLO, YOLACT, GANs, Transformers, Deep Q Networks, Policy Gradients - PPO.

ACADEMIC PROJECTS

- **CyberStream**   **Jan 2023 – Dec 2023**
  Setting up a reliable, real-time websocket communication channel for a Robot-as-a-Service platform facilitating the robots to play soccer autonomously. Challenges include processing and bi-directional transfer of multimodal data in real-time with low latency. Includes real-time video streaming for robot tracking using Computer Vision.
- **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 using the MERN stack and deployed on AWS-EC2 with Elastic Load Balancer.
- **Barks & Meows**   **Aug 2021 – Dec 2021**
  An interactive website for a cafe exclusively for pet lovers. Microservices include Signup/Login, advertising product details using APIs, tracking recently visited products and most visited products using Cookies,and adding review and ratings.