Vignesh Muthukumar

919-637-2317 vickymhs@gmail.com LinkedIn Github Website Google Scholar

Education

North Carolina State University **Aug 2021 – Present**
Masters of Science in Computer Science

SSN College of Engineering, Anna University **Jun 2015 – May 2019**
B.Tech, Information Technology 8.47/10

Relevant Coursework

Graduate : Design & Analysis of Algorithms, Software Engineering, Database Management Systems.
Undergraduate : Artificial Intelligence, Web Technology, Operating Systems, Computer Networks.

Experience

Ninjacart **Jun 2019 – Jul 2021**
Software Engineer Bangalore, India

- Architected backend APIs for SCM Tech (fleet and driver management) including Onboarding, Verification, Facial Attendance, Communication, Ticketing and Tariff Calculation.
- Designed and developed the backend service for *Last Mile Delivery process* using Java Spring and Dropwizard to standardize the entire logistic operations.
- Primary developer for *Real-time Live Location Tracking* feature using Java Vertx and Apache Kafka that reduced the transit latency by 40% and increased the on-time delivery from 60% to 90%.
- Developed a microservice for *Centralized Configuration Management* to facilitate the deployment and scaling process.

Projects

Marketplace - Database application | *Java, SQL, RDBMS* **Sep 2021 - Nov 2021**

- Developed a JDBC based Marketplace environment application by extending software design patterns.
- To ensure scalable schema design, implemented nested SQL queries, triggers, and stored procedures.

Binge - Browser Extension for Streaming Platforms | *Javascript* **Sep 2021 - Nov 2021**

- Developed a Google Chrome Extension for Netflix that displays information like IMDb movie ratings, meta-critic reviews and cast details about the video content that are not available on the platforms by default.
- Leveraged open source IMDb APIs to get information about the video, and browser level caching was implemented to speedup access to data.

Deep Learning based Dropout Prediction in MOOCs over weeks | *Python* **Nov 2018 - Apr 2019**

- Developed a system that predicts the student dropout rate during successive weeks of a course and provides them with targeted interventions and improvements.
- Implemented *MLF Neural Network* and evaluated predictions using metrics like *ROC, RMSE, Precision and Recall.*

Employee Burnout Predictor | *Python, Flask, HTML, CSS* **Nov 2020 - Dec 2020**

- Created a web based Employee Burnout Prediction system using HTML, CSS for the UI and Flask for the backend.
- Implemented a Deep Neural Network model using open source data to perform prediction analysis on employee's burnout rate in their workplace.

Technical Skills

Languages: Python, Java, C++, HTML/CSS, JavaScript, SQL
Frameworks: Java Spring, Vert.x, Dropwizard, Numpy, Scikit-Learn, Pandas, JSON
Tools and Platform: Linux, Jenkins, GitHub, Bitbucket, Apache Kafka, Jupyter Notebooks.

Publications

Muthukumar Vignesh and N. Bhalaji, **"MOOCVERSITY-Deep Learning Based Dropout Prediction in MOOCs over Weeks"**, *Journal of Soft Computing Paradigm* (JSCP), vol. 2, no. 03, pp. 140-152, 2020.

Awards

Ranked 1st in India, 34th in the world out of 5000 teams at **IEEE-Xtreme - 2018**.