ARAVIND VASUDEVAN

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Education

Carnegie Mellon University – School of Computer Science   *Pittsburgh, PA*
Master of Software Engineering – Scalable Systems   *December 2020*

Anna University   *Chennai, India*
Bachelor of Engineering – Computer Science   *May 2018*

Coursework

DevOps, Engineering Data Intensive Scalable Systems, Architecture for Software Systems, Introduction to Machine Learning, Analysis of Software Artifacts, Object Oriented Analysis & Design, Introduction to Computer Systems.

Experience

Zoho Corporation   *Chennai, India*
Member Technical Staff   *June 2018 - May 2019*
- Implemented an annotation-based transaction handling framework using Aspect-Oriented Programming.
- Designed an internal HTTP connection pool library to work with multiple services simultaneously.
- Developed a library that loads multiple i18n keysets without collision in a project split across multiple repositories.
- Built a tool to manage configuration validation and building across multiple codebases.

Zoho Corporation   *Chennai, India*
Project Trainee   *December 2017 - March 2018*
- Architected an inter-service communication framework using observable pattern that can trigger distributed functions.
- Decoupled features in Zoho CRM into multiple repositories and designed them to work together as libraries.
- Rewrote several classes to migrate to our custom architecture.

Tata Consultancy Services   *Chennai, India*
Project Intern   *June 2017 - July 2017*
- Prototyped a chatbot to simplify data lookup in Planatics, an internal financial data management tool, using RASA NLU.
- Learned to build microservices and REST API endpoints for service interaction.

Independent Projects

Yabber   *MEAN Stack*
- Implemented a concurrent group chat application using MEAN Stack and Redis.
- Followed software engineering practices such as use case modeling, interface designing, and data modeling.
- Documented Software Requirement Specification, and Design and Data Model before development.
- Realized the schema using a modified ER diagram for Mongo DB and Redis.

Lendr   *Spring Framework*
- Created Hybrid mobile application using ionic that facilitates lending-borrowing of everyday commodities within a location.
- Developed the backend using Spring framework and MySQL.

Clip-Sync   *Flask framework*
- Built an application that shares the system's clipboard within a network which helps in collaborative documentation.
- Designed the server component using Flask and the real-time clipboard sharing using Flask-SocketIO.

2048 AI   *Expectimax Algorithm*
- Devised an AI solver for the game 2048 using the heuristic expectimax tree search algorithm.
- Created the 2048 game interface for the AI using Angular 6 and SCSS.

Defect Predictor   *Machine Learning*
- Created a tool that predicts the numbers of bugs that might occur in a project based on the team's previous experience.
- Tested the data with various regression models and finalized AdaBoost regressor based on test and validation error.
- Used Grid Search algorithm to tune the hyperparameters for the models which improved the test data accuracy to 70.74%.

Skills

Backend: Struts, Spring, Node.js, PHP, Flask.
Frontend: Angular, JQuery, SCSS, Handlebars, Electron, HTML, CSS, Javascript.
Database: MySQL, MongoDB, Redis.
Programming Languages: Java, Python, C, C++, Shell Scripting, R.