

# ARAVIND VASUDEVAN

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## Education

### Carnegie Mellon University

Master of Software Engineering – Scalable Systems

*Pittsburgh, PA*

*December 2020*

### Anna University

Bachelor of Engineering – Computer Science

*Chennai, India*

*May 2018*

## Coursework

Methods: Deciding What to Design, Models of Software Systems, Managing Software Development, Introduction to Machine Learning, Design and Analysis of Algorithms, Object Oriented Analysis & Design, Introduction to Computer Systems.

## Experience

### Zoho Corporation

Member Technical Staff

*Chennai, India*

*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

Project Trainee

*Chennai, India*

*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 accommodate to support migration to our custom architecture.

### Tata Consultancy Services

Project Intern

*Chennai, India*

*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.

## Personal Projects

### Yabber

*MEAN Stack*

- Concurrent group chat application using MEAN Stack and Redis.
- Software engineering practices such as use case modeling, interface designing, and data modeling were followed.
- Software Requirement Specification, and Design and Data Modeling documentation were made before development.
- The schema was realized using a modified ER diagram for Mongo DB and Redis.

### Lendr

*Spring Framework*

- Hybrid mobile application using ionic that facilitates lending-borrowing of everyday commodities within a location.
- The backend of the application was built using Spring framework and MySQL.

### Clip-Sync

*Flask framework*

- Clip-Sync allows sharing a system's clipboard within a network and is useful when working on documents as a group.
- The server component was built using Flask and the real-time clipboard sharing is handled using Flask-SocketIO.
- The clipboard of the system is shared via HTTP.

### 2048 AI

*Expectimax Algorithm*

- AI solver for the game 2048 that plays the game using the heuristic expectimax tree search algorithm.
- The 2048 game interface is implemented using Angular 6 and SCSS.

### Defect Predictor

*Machine Learning*

- A ML tool that predicts the numbers of bugs a project 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.
- Grid Search was used to tune the hyperparameters for the models.

## Skills

**Web Development** Node.js, Angular, Struts, Spring, JQuery, SCSS, Handlebars, PHP, Docker, HTML, CSS, Javascript.

**Database** MySQL, MongoDB, Redis.

**Programming Languages** Java, Python, C, C++, Shell Scripting, R.