

# ARAVIND VASUDEVAN

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## Education

### Carnegie Mellon University – School of Computer Science

Master of Software Engineering – Scalable Systems

Pittsburgh, PA

December 2020

### Anna University

Bachelor of Engineering – Computer Science

Chennai, India

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

### GoDaddy Inc.

Intern — Software Development Engineer

Kirkland, WA (Remote)

May 2020 - Present

- Redesigned our analytics tool into multiple processes, which improved the overall runtime by two hours.
- Devised an architecture for our analytics tool using AWS Batch, which would further improve runtime.
- Volunteered for the scrum master role and handled our meetings and retrospective documentations.

### 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 migrate 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.

## Academic Projects

### Scalable Ecommerce Web Application

Jan 2020 - May 2020

- Implemented a data-intensive ecommerce application with around a million products.
- Used AWS RDS for database and ECS auto scaling group with load balancer to serve over a million requests/minute.
- Engineered distributed cache invalidation strategy and session storage using AWS ElastiCache.
- Optimized search queries by indexing and caching frequent searches to handle the load.

### Smart Home System

Jan 2020 - May 2020

- 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.

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### 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

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**Backend:** Express (Node.js), Struts, Spring, Flask.

**Database:** MySQL, MongoDB, Redis, RabbitMQ.

**DevOps:** Docker, Jenkins, Vagrant, AWS, Ansible, Kubernetes (Intermediate).

**Frontend:** Angular, JQuery, SCSS, Electron, HTML, CSS.

**Programming Languages:** Java, Python, Javascript, C, Bash.