

# ARAVIND VASUDEVAN

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## Experience

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### Google LLC

Software Engineer III

Mountain View, CA

November 2021 - Present

- Mitigated resource exhaustion-related outages in LUCI CV for chromium/chromiumos related projects by architecting a redis-based quota manager that limits the number of concurrent presubmit runs per user.
- Optimized gclient sync no-op runtime by 51.4% in windows which improved chromium developer experience.
- Redesigned depot\_tools to parse git submodules which unblocks chromium to move away from outdated DEPS.
- Reduced user frustration with git-repo by devising a condensed error summary UX which provided actionable next steps.
- Aided in master→main migration within the chromium project by contributing branch redirection feature to codesearch.

### GoDaddy Inc.

Kirkland, WA

Software Development Engineer II

March 2021 - November 2021

- Conceptualized a global control group feature which allows teams to access statistical impacts across a series of A/B tests.
- Integrated all our analytics services with monitoring tools to measure quality, availability, and performance of the product.
- Assembled a jenkins pipeline to test and auto-deploy projects using AWS CDK which is used by two new products.

Intern — Software Development Engineer

May 2020 - August 2020

- Reduced execution time of the analytics tool by two hours by redesigning it into multiple processes.
- Devised an AWS Batch based architecture to parallelize analysis in the analytics tool, which will further decrease runtime.
- Volunteered for the scrum master role to handle our project backlog on Jira, scrum meetings, and retrospective.

### Zoho Corporation

Chennai, India

Member Technical Staff

June 2018 - May 2019

- Simplified transaction handling by implementing an annotation-based framework using Aspect-Oriented Programming.
- Built an HTTP connection pool library that can share pools between modules separated across multiple codebases.
- Modularized i18n keysets by developing a library to load and validate keys across multiple repositories without collision.
- Distributed configuration across runtime-dependent repositories by building a tool to manage and validate conf files.
- Fixed distributed lock handling mechanism in Zoho CRM, which removed race-conditions between database operations.

Project Trainee

December 2017 - March 2018

- Minimized dependency among teams by decoupling Zoho CRM into several compile-time independent components.
- Architected an observable-based inter-service communication framework that can resolve function calls at runtime.

## Education

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### Carnegie Mellon University – School of Computer Science

Pittsburgh, PA

Master of Software Engineering – Scalable Systems

December 2020

**Coursework:** Distributed Systems, DevOps, Engineering Data Intensive Scalable Systems, Architecture for Software Systems, Introduction to Machine Learning, Analysis of Software Artifacts, Introduction to Computer Systems.

**Teaching Assistantship:** 17323/17623: Quality Assurance. October 2020 - December 2020.

### Anna University

Chennai, India

Bachelor of Engineering – Computer Science & Engineering

May 2018

## Academic Projects

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### Distributed Bitcoin Miner

CMU Fall 2020

- Modeled an application layer protocol on top of UDP with resilience, liveness, and packet sequencing.
- Developed the protocol to be connection-oriented and support the client-server model natively.
- Implemented a distributed bitcoin miner system on top of this protocol with fault-tolerance.
- Designed the miner to be the client and the server to load-balance mining jobs using SRTF scheduling and chunking.

### Scalable Ecommerce Web Service

CMU Spring 2020

- Engineered a highly-scalable e-commerce app that can serve over a million requests/minute using EC2 and load balancer.
- Handled search functionality for around a million products using AWS RDS for storage and AWS ElastiCache for caching.
- Improved response time to under a second by devising a distributed in-memory caching framework.
- Synchronized the distributed cache using the check-on-use invalidation strategy and handled overflow using LRU eviction.

## Skills

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

**Backend & Database:** Node.js, Struts, Spring, Flask, MySQL, MongoDB, Redis, RabbitMQ.

**DevOps:** Docker, Jenkins, Vagrant, AWS stack, Ansible, Kubernetes.

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