

ABHIJITH RAMALINGAM

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WORK EXPERIENCE

Engineering Team Lead & Sr Software Engineer | BioRender

Mar 2021 - Dec 2023

- Developed cloud infrastructure for a scientific diagramming application with a large active user base to support features like real-time collaboration and statistical computation while remaining resilient using [Typescript](#), [React](#), [Node.js](#), [MongoDB](#) and [AWS](#)
- Migrated the application with zero downtime from [Heroku](#) to [AWS](#) improving reliability and system integration.
- Managed and mentored interns through onboarding, 1-1s, feedback sessions and fostered a team-first, collaborative environment.
- Created processes to increase app reliability through incident response plans, retrospectives, and chaos engineering; led cross-functional incident responses and post-mortems to improve software quality and architecture.
- Maintained an observability system using [Elastic \(ELK\)](#) for monitoring, alerting, troubleshooting, and application performance insights; collaborated across teams to promote usage, improve DevOps culture and develop system-wide monitoring.

Backend Developer | Hubba

Sept 2018 - Dec 2020

- Developed technical features for an ecommerce marketplace built with microservices using [Node.js](#), [MongoDB](#), [AWS ECS](#).
- Collaborated with a data team to build a [scalable, realtime pipeline](#) that aggregates data from different sources to Salesforce using [Python](#), [PubSub](#), [Kubernetes](#), in order to deliver time-sensitive, targeted information to sales reps, leading to increases in revenue.
- Led the development of promotions, referrals and payment flows leading to an increase in new buyer signups.
- Reduced code complexity by making architecture upgrades to a tangled, legacy microservices approach using a [GraphQL](#) gateway.

Software Engineering Intern | Amazon (Ag.com)

May 2017 - Aug 2017

- Worked on the core infrastructure of the [Advertising Data Platform](#), that handles tens of PBs of data monthly.
- Reduced data storage costs by modifying open source [Hadoop](#) code to integrate with an internal Amazon service, allowing analysts to create [Hive](#) jobs and write distributed queries on encrypted data stored in [AWS S3](#).
- Performed benchmark tests with [Hive](#), querying terabytes of data to compare performance tradeoffs between [HDFS](#) and [S3](#).

Software Development Intern | Capital One Canada

Sept 2016 - Dec 2016

- Developed a [reusable](#) and [highly-available](#) infrastructure for Data Science projects using [EC2](#), [Docker](#), [Terraform](#).
- Wrote a [Node.js API](#) that integrated with internal data models and services, to present Mobile Beta users with their predicted recurring monthly credit card transactions.

Distributed Systems Engineering Intern | Wave Inc.

Jan 2016 - April 2016

- Developed scalable, fault-tolerant backend APIs for a cloud-based accounting product with [Python](#) and [Django](#).
- Implemented [Event Sourcing](#) by storing each database change as sequenced and immutable event for increased auditability.

TECHNICAL SKILLS

Languages: Typescript, Python, JavaScript, Java, C/C++

Web: HTML/CSS, Node.js, Express, React, Django, Flask

Cloud: AWS (S3, EC2, Lambda, Infra as Code), Bash, Docker

Database: MongoDB, MySQL, PostgreSQL, Redis

PROJECTS

Smart Vents : (Sept 2017 - March 2018) Cloud Lead for an IoT (Internet of Things) system that lets users control individual room temperatures inside their homes using a smart vent system and a smart thermostat. Won a \$500 award for "Best IoT Project" at the Mechatronics Engineering Design Symposium. *Tech Used: Python, Node.js, AWS (IoT, EC2, S3), Heroku, MongoDB*

Autonomous Mobile Robotics Labs: (Sept 2017 - Nov 2017) Implemented path planning, mapping and localization for a small personal robot (turtlebot) as part of coursework for "Autonomous Mobile Robots". *Tech Used: C++, ROS*

EDUCATION

University of Waterloo

Sept 2013 - April 2018

- BAsC in Mechatronics Engineering, Honours, Co-operative Program. Graduated with distinction.
- **Coursework:** Autonomous Mobile Robots, Algorithms and Data Structures, Statistical Analysis