VARUN BHARATHI JAYAKUMAR

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EDUCATION

Northeastern University | **Boston, MA** — **Expected Aug 2024**
Master of Science in Software Engineering Systems | GPA: 3.9

Vellore Institute of Technology | **Vellore , India** — **April 2022**
Bachelor of Engineering in Computer Science and Engineering | GPA: 3.6

EXPERIENCE

Zulip - Open Source | **San Francisco, CA** — **April 2024 – Present**
Contributor - Remote

World Health Youth Federation | **Boston, US** — **Jan 2024 – Present**
Software Engineer - Remote

- Authored and Deployed asynchronous, event-driven ML model for video processing on AWS using CloudFormation, achieving 30% increase in processing efficiency and supporting scalable video analytics
- Developed REST API backend for a mobile application featuring over 10 distinct functionalities, enhanced user engagement by 25%
- Led team of 3 in the development of a comprehensive product, resulting in 15% faster product delivery time

Cohere Health | **Boston, US** — **June 2023 – December 2023**
Software Engineer Co-op

- Built 12+ features for healthcare product that simplifies process of gathering prior authorization requests from healthcare providers and tracking progress of requests customizable to meet specific needs of different health insurance companies (payers) with React.js, Grails
- Automated daily data back-fill process in the database through scheduled job in Grails, transforming a cumbersome week-long task of handling 250,000 records into a streamlined daily operation, leading to 85% improvement in completion time
- Identified and resolved discrepancies within Docker image environments to rectify text misalignment's and bleeding in generated PDF, resulting in 95% reduction in visual inconsistencies between local and deployed environments
- Contributed to back-end framework version migration from Grails 4 to Grails 5, significantly reducing compatibility issues by 30%, thereby easing transition and enabling a smoother traffic redirection
- Automated manual e2e smoke tests implementing automated solution with Cypress, saving 90 minutes developer time per day

Waveus Network | **Bangalore, India** — **Apr 2021 – Jul 2021**
Software Engineer Intern

- Designed and developed responsive front-end in multiple client applications using PHP based Yii2 framework improving usability and decreasing UI (user interface) feature delivery time by 20 percent
- Facilitated infrastructure deployment with Terraform and Google Cloud, facilitating consistent and reproducible infrastructure deployments across development, staging, and production environments
- Implemented lazy loading, static assets caching and optimized HTTP requests to improve web-page performance by 23%
- Integrated website performance monitoring tools (Google PageSpeed Insights, Lighthouse) to enable webpage performance logging

ACADEMIC PROJECTS

MultiZone Cloud Deployment, Northeastern University | *Terraform, Google cloud, CI/CD, Packer, Node.js* <u>Github</u> <u>Webpage</u> — **Apr 2024**
- Implemented CI/CD pipeline for a web application using GitHub Actions, automating image builds via Packer on Google Cloud, and dynamically updating Google Cloud instance template
- Architected and managed Infrastructure as Code (IAC) using Terraform, enabling scalable (Auto-scaling, Multi-AZ) and secure cloud infrastructure setups across multiple components including DNS, SSL, and Load balancer
- Developed serverless function on Google Cloud Function to handle email verification, integrated with a Google Cloud Pub/Sub event-driven architecture for real-time user management

MealTrain, Northeastern University | *NextJS, AWS, REST API, AWS, Node.js, MongoDB* <u>Github</u> <u>Webpage</u> — **Dec 2023**
- Built client application with NextJS. Implemented features to view menu of restaurants, order food through cash on delivery or payment gateway and track order status. Utilized server-side rendering to improve search engine optimization by 20%
- Built second client app for order and menu management, boosting performance by 10% with Amazon S3 image storage
- Developed backend REST API with Nodejs, MongoDB implementing JWT token for authentication. Thus, making API secure

TECHNICAL SKILLS AND CERTIFICATION

Certification: AWS Solutions Architect (March 2026) — AWS Certified Cloud Practitioner (August 2024)
Backend Technologies: Python, node.js, Spring Core, Spring MVC, Hibernate, Maven, Spring Boot, REST , Groovy, Java GraphQL
Frontend Technologies : HTML5, CSS, SASS/SCSS, JavaScript, TypeScript, Angular, React, Next.js, Redux, Cypress, Jest
Database: MongoDB (NoSQL) ,PostgreSQL (SQL) ,MySQL(SQL) , Redis , Elastic Search
Cloud and Deployment: AWS, GCloud, Terraform, GitHub actions, Packer, CI/CD, EC2, ECS, S3, Route53, ELB, API Gateway
Methodologies/Practices: Agile, Software Development Lifecycle, Jira, Confluence, Git, Problem-solving, Communication, testing