

# GANESH PATIL

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Portfolio: [ganesh021.github.io](https://github.com/ganesh021)  
LinkedIn: [linkedin.com/in/patil-ganesh](https://www.linkedin.com/in/patil-ganesh)  
GitHub: [github.com/GaneshPatil21](https://github.com/GaneshPatil21)

## EDUCATION

**Northeastern University**, Boston, MA

April 2024

Master of Science in Computer Software Engineering (GPA: 3.7/4)

Relevant Coursework: Cloud Computing, Data Structures & Algorithms, Object Oriented Programming, Web Design & UI/UX, Big Data

## EXPERIENCE

**Software Engineer**, HCL Tech

**Google**, San Francisco, CA

May 2021 - Jun 2022

- Collaborated with cross-functional teams for developing over 50+ **RESTful APIs** and **documented** specifications with Swagger
- Elevated **Java Spring Boot** microservices availability to 99.99% through robust inter-service communication resiliency pattern
- Enhanced legacy code throughput by 10%, enabling **concurrent** processing of millions of records by **multi-threading** in **Java**
- Integrated **Selenium** automation with **Hibernate** persistence objects mapping, elevating database updates efficiency at scale
- Crafted 100+ **unit & integration** tests with **Junit**, increasing code coverage from 60% to 95% using **Test Driven Development (TDD)**
- **Stack:** Java, Spring Boot, Hibernate, Linux OS, JVM, MVC, Maven, Gradle, OpenAPI, GraphQL, Tomcat, SOAP, Selenium, Agile

**Siemens**, Dallas, TX

Oct 2020 - May 2021

- Scaled **AWS** infrastructure horizontally to support over 10,000 clients, with load balancer, auto scaling and AWS EC2, AMI, S3, RDS
- Architected a **Docker** and **Kubernetes**-based orchestration strategy, achieving a 40% reduction in deployment workflows
- Optimized **Java** memory usage & reduced garbage collection pauses, resulting in a 25% reduction in server resource consumption
- Engineered **cache** management APIs using **Redis**, **Nods.js**, enhancing application read performance and minimizing network load
- Reduced application load time by 50% through service worker caching, **reverse proxies**, and **server-side rendering (SSR)**
- **Stack:** J2EE, Java, MySQL, AWS - EC2, S3, RDS, SQS, VPC, Route53, IAM, Docker, Kubernetes, CI/CD, SOA, REST, Node.js, OAuth2

**Software Developer**, Kaalpanik Technologies, Pune, IN

Jan 2019 - Sep 2020

- Leveraged **Terraform** to automate infrastructure deployment on **AWS** across production and QA, reducing manual efforts by 80%
- Streamlined **CI/CD** pipeline with **Jenkins** by automating builds, tests, and deployment, leading to 30% decrease in lead time
- Optimized **React** web components leveraging **React Hooks**, **Redux** and Context API streamlining scalability of stateful logic
- Developed ETL (Extract, Transform, Load) pipelines using **Python** to process Big data, and retrieval of mass data in JSON format

## TECHNICAL SKILLS

**Programming Languages:** Java, JavaScript, Python, C/C++, SQL, Bash

**Back-end Technologies:** J2EE, Spring Boot, Spring MVC, Hibernate, Node.js, Linux/Unix, Apache Kafka, Tomcat, Maven

**Front-end Technologies:** React, React Native, Redux, ES6, Angular, Webpack, HTML, CSS

**Cloud & DevOps:** AWS - EC2, S3, SQS, Lambda, VPC, RDS, Docker, Kubernetes, Terraform, Packer, CI/CD, Git

**Database & Frameworks:** MySQL, PostgreSQL, MongoDB, Oracle, Redis, Elasticsearch, GraphQL, WebSockets

## PROJECTS

**IaC Provisioner | Visual Studio Code Extension** | [Link](#) | *Terraform, AWS CloudFormation, HashiCorp Packer, Pulumi*

Empowering cloud infrastructure development across AWS, Microsoft **Azure** and **GCP**, streamlining resource provisioning

**Cloud Native Distributed Web Application** | [Link](#) | *Java, Spring Boot, AWS, Docker, Kubernetes, MySQL, GitHub Actions*

Developed a production-ready infrastructure, orchestrating an auto-scalable Kubernetes cluster, RDS, **DynamoDB** instances, and **CloudWatch** alarms across multiple AZs, achieving 99.9% uptime. Crafted **shell scripts** to automate CI/CD pipeline within GitHub Actions and utilized Packer to containerize applications in AWS AMI resulting in auto startup of app when EC2 instances are launched

**Application Tracking Portal** | [Link](#) | *Node.js, React.js, Express.js, Redux, MongoDB, Cross-browser compatibility*

A single page application, streamlining job tracking with **authentication** via JWT Tokens, managed user sessions, visual graphs & charts

**GPA Estimator** | [Link](#) | *Python, Machine Learning, Regression Analysis, Predictive Analytics, Data Analysis, Django*

Engineered a Machine Learning model to offer predictive insights for Computer Science Dept. students by employing regression analysis and using historical academic data to forecast grades by analyzing patterns and trends within academic performance data

## LEADERSHIP & PUBLICATIONS

- Patent - "Implementation of dynamic road Infrastructure as per run time requirement". No: [202021030039](#)
- Medium Blogs: <https://medium.com/@ganesh02103>