GANESH PATIL

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Portfolio: ganesh021.github.io
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EDUCATION

Northeastern University, Boston   Expected Dec 2024
Master of Science in Information Systems *(GPA: 3.7/4)*
Relevant Coursework: Cloud Computing, Data Structures & Algorithms, Object Oriented Programming, Web Design & UI/UX

EXPERIENCE

Software Engineer   Dec 2020 - Jun 2022
HCL Technologies   *Pune, India*
- Realized a 25% reduction in monthly cloud expenses by transitioning to cost optimal solutions in AWS, leveraging JVM thread tuning, concurrent programming, autoscaling, which collectively increased utilization from 30% to over 80%
- Collaborated with cross-functional teams for developing over 50+ RESTful APIs and documented specifications using Swagger
- Spearheaded the design and implementation of a scalable microservices-based system for a PLM service using Node.js
- Co-developed a back-end system initially capable of handling 300 requests per second (rps) and, through horizontal scaling with a NGINX load balancer, optimized it to support 900 rps, marking a remarkable 200% performance increase
- Improved microservice availability to 99.9% through implementation of a robust inter-service communication resiliency pattern
- Ran Performance Tests under varying load conditions contributing towards system stability, improving service efficiency by 15%
- Architected and deployed a Java Spring Boot-based microservices blueprint by encapsulating configurations into reusable Docker components. This empowered other teams to effortlessly spin off services, significantly reducing development timelines
- Engineered cache management APIs, Event Logger, enhancing application-wide read performance and minimizing network calls
- Delivered multiple cumulative Patch Releases, and Hot Fixes in an Agile and Kanban software development methodology
- Stack: Linux OS, JVM, Spring Boot, Node.js, SOA, Docker, Kubernetes, NGINX, REST, Redis, AWS - EC2, S3, VPC, Kafka, CI/CD, Git

Software Engineer Intern   Oct 2020 - Dec 2020
HCL Technologies   *Pune, India*
- Improved performance of the legacy code which handles millions of records by more than 5% using multi-threading in Java
- Revamped software efficiency by synchronizing jobs across Kubernetes pods, accelerating backend speed by 10%
- Spearheaded POC for a schema-driven Linux daemon to oversee platform-independent software for configuration management

Software Developer Intern   Jan 2020 - Jun 2020
Alsis Tech   *Pune, India*
- Achieved ~6kb reduction in Webpack bundle size by using React hooks, Context API and code splitting across multiple modules
- Decomposed monolithic application into microservice-based architecture to enhance system scalability and maintainability
- Developed ETL (Extract, Transform, Load) pipelines using Python to process Big data, and retrieval of data in JSON format
- Implemented 100+ unit and integration tests with JUnit, increasing code coverage from 60% to 95%
- Stack: Node.js, Express, React, Redux, JavaScript, Java, Junit, Python, MySQL, Webpack, Git, Postman

TECHNICAL SKILLS

Programming Languages: Java, JavaScript, Python, SQL, C/C++, Bash
Server-side Technologies: Node.js, Express.js, Spring Boot, Spring MVC, Hibernate, Linux/Unix, Apache Kafka, NGINX
Client-side Technologies: React, Redux, ES6, React Native, Webpack, Gulp, Babel, Eslint, HTML, CSS
Cloud & DevOps: AWS (EC2, S3, Lambda, VPC, RDS), Docker, Kubernetes, Terraform, Packer, CI/CD, Git
Database & Frameworks: MySQL, PostgreSQL, MongoDB, Oracle, Redis, Elasticsearch

PROJECTS

IaC Provisioner | Visual Studio Code Extension | *Link to Extension* | *Terraform, AWS CloudFormation, Packer, Pulumi*
Empowering cloud infrastructure development across AWS, Azure and GCP, streamlining resource provisioning in cloud projects
Distributed Blog Application | *Java, Spring Boot, AWS, Docker, Kubernetes, Terraform, Apache Kafka, MySQL, Lambda*
Utilized Kafka topics, producers, and consumers for communicating between decoupled microservices; Used Terraform for provisioning infrastructure to run auto-scalable Kubernetes cluster; Lambda for individual microservices in serverless architecture
Application Tracking Portal | *App Link* | *Node.js, React.js, Express.js, Redux, Cross-browser compatibility, MongoDB, CI/CD*
Created a full-stack single page application, streamlining job application tracking. Incorporated a secure authentication system with JWT Tokens. Utilized Nginx to perform static serving and reverse proxying. Implemented CI/CD with GitHub Actions
GPA Estimator | *App Link* | *Python, Django, JavaScript, Ajax, HTML5, CSS3, Bootstrap*
An app for Computer Science students to estimate their grades based on relative course difficulty and plan academic coursework

LEADERSHIP & PUBLICATIONS

- Patent - "Implementation of dynamic road Infrastructure as per run time requirement". *No: 202021030039*
- Explore my technical insights and expertise through my Medium Blogs: https://medium.com/@ganesh02103