GANESH PATIL

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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*
- Reduced page **load time** of the application by 50% using optimizations along with **caching** by **service workers** and **reverse proxies**
- Implemented route-based **code-splitting** along with **compression** to reduce production **bundle size** by 20%
- Developed **interactive** front-end components using React and React **Hooks** to simplify maintaining and scaling **stateful logic**
- Contributed **15+** media components to the company's **React standard library**
- Optimized page **rendering** speed from 2 seconds to a swift 0.5 seconds by implementing **infinite scrolling** and **lazy loading**
- 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**
- 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**
- Delivered multiple cumulative **Patch Releases**, and **Hot Fixes** in an **Agile** and **Kanban** software development methodology
- **Stack:** React, Redux, Node.js, JavaScript, Java, Linux OS, NGINX, Docker, Kubernetes, REST, Redis, AWS - EC2, S3, Kafka, CI/CD

Software Engineer Intern   Oct 2020 - Dec 2020
HCL Technologies   *Pune, India*
- Strengthened security throughout the application by centrally implementing **JSON Web Token** (JWT) in the middleware
- Significantly reduced page load time by up to 30% by **minifying** JavaScript and CSS using **NPM**, **Gulp**
- **Revamped** software efficiency by synchronizing jobs across **Kubernetes** pods, accelerating backend speed by 10%

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
- Implemented **100+ unit** and **integration** tests with **Jest**, increasing code **coverage** from 60% to 95%
- Used **Server-side rendering** (SSR) and **Client-side Rendering** (CSR) for faster loading and **SEO** optimization
- Leveraged **FIGMA** to design **UI** assets and elements, **enhancing** user experience with a polished and **user-friendly** interface
- **Stack**: Node.js, Express, React, Redux, React Hooks, JavaScript, Jest, Mocha, Webpack, MySQL, Git, Postman

TECHNICAL SKILLS

Programming Languages: JavaScript, TypeScript, Java, Python, SQL, C/C++, Bash
Client-side Technologies: React, Redux, ES6, React Native, Ajax, Webpack, Babel, Gulp, Eslint, HTML, CSS, Bootstrap
Server-side Technologies: Node.js, Express.js, Spring Boot, Spring MVC, Hibernate, Linux/Unix, Apache Kafka, NGINX
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, SCSS, 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