Karthik Vanabhojana

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Graduate student with 3+ years of experience in Java backend development, complemented by hands-on frontend development, extensive work with databases, and cloud-based systems. Adept at leveraging technical expertise to design, develop, and troubleshoot secure and high-performance software solutions. Proficient in delivering scalable and reliable applications using cutting-edge technologies, with a passion for driving continuous improvement and innovation.

Education

Northeastern University **Boston, MA**
Master of Science in Information Systems *Expected Aug 2025*
Visvesvaraya Technological University **Bengaluru, India**
Bachelor of Engineering in Mechanical Engineering *Aug. 2016 - Aug. 2020*

Skills

Languages: Java, SQL, Python, Shell Script JavaScript, HCL, HTML and CSS
Frameworks: Bootstrap, Express.js, JUnit, Microservices Architecture, NodeJS, Shell Scripting, Spring Boot, Spring MVC, React
Devops: Google Cloud Platform, Amazon Web Services, Terraform , Packers, EC2, Compute Engine, Kubernetes and Docker
Developer Tools: Maven, Git, Git CLI, Visual Studio Code, IntelliJ IDEA, Eclipse, npm, Homebrew
Databases: MongoDB, MySQL, Cassandra, Redis, PostgreSQL

Experience

Mimosa Networks **Frisco, USA**
Software Development Intern *May. 2024 - Present*

- Deployed Docker containers to manage messaging queues with Kafka, optimizing microservices communication and ensuring efficient, scalable message processing for high-throughput environments.
- Orchestrated the deployment of a network management platform using Kubernetes, enabling seamless application deployment, scaling, and management.
- Designed and implemented advanced wireless broadband network management strategies, improving performance and reliability through proactive data analysis and optimization.
- Engineered secure session management systems to streamline authentication and access control in distributed environments.

Accenture **Bengaluru, India**
Custom Software Engineering Analyst *Feb. 2023 - Jun. 2023*

- Developed modular Java libraries to simplify logging and exception handling, reducing code complexity by 10%.
- Leveraged ELK for log aggregation, enhancing real-time data transfer and analytics during a critical marketplace layer development project.
- Collaborated within Agile teams to enhance software engineering practices, emphasizing operational stability and resiliency.

Custom Software Engineering Associate *Jan. 2021 - Jan. 2023*

- Engineered a robust API layer with **Java, Spring Boot, GraphQL,** and **MVC architecture,** integrating vendor and host systems to enable seamless data sharing, reducing production lead time by 15%.
- Proactively analyzed hidden data patterns to optimize system compatibility and operational efficiency.
- Implemented and enforced peer-review methodologies to ensure high-quality production code aligned with design constraints.

Projects

Northeastern University **Boston, MA**
Cloud-Native API Development and Infrastructure Automation Project *Jan. 2024 - Apr. 2025*

- Established **CI/CD** pipeline on **Google Cloud Platform** with load balancing, auto-scaling via Serverless Computing, and **Terraform** for automation, following IaaC principles
- Enhanced security and real-time processing by introducing **Cloud Function** for email validation, integrating Pub/Sub for validation links, **CloudSQL** monitoring, and enforcing secure Pub/Sub communication with IAM role binding

Personalized accommodation for University Accommodation *Nov. 2023 - Dec. 2023*

- Engineered a web application utilizing **Next.js, Typescript, Tailwind, and MongoDB,** tailored to meet the accommodation needs of university students relocating to new areas, highlighting proficiency in modern web development technologies
- Implemented robust security measures including secure authentication with university email IDs and **bcrypt** encryption, effectively mitigating the risk of frauds and ensuring user data integrity and confidentiality