Bhanu Gupta

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Skills Summary

- **Languages/Database:** Python, Java, C++, Go, Javascript, MySQL, PostgreSQL, MongoDB, Redis
- **Frameworks/Libraries:** React, Django, Flask, Spring Boot, Jest, Selenium, Cypress, JUnit
- **Technologies:** REST APIs, GraphQL, Kafka, Terraform, Docker, AWS, GCP, Jenkins

Education

New York University **September 2022 – May 2024**
Master of Science in Computer Engineering; GPA: 3.7/4 New York City, NY

SRM Institute of Science and Technology **July 2018 – June 2022**
Bachelor of Technology in Computer Science and Engineering; GPA: 8.7/10 Chennai, IN

Experience

Software Engineer Intern **Flipped.ai (prev. Gaius Hyperlocal)** **Sept 2020 – June 2022**

- Developed the core web application using **ReactJS** and **Django**, and seamlessly integrated into **Jenkins based CI/CD** pipelines. Deployed on AWS - EC2.
- Enhanced application resilience by isolating notifications into a dedicated microservice, with **Apache Kafka** for message brokering and **Redis** for caching.
- **Achieved a 3x increase in search performance** by developing **REST APIs** to store history and deliver personalized results.
- Reduced build time by 30% by containerizing with Docker and using **Terraform** scripts for infrastructure setup.
- Led scaling efforts as founding engineer, achieving a user base of 15,000 from inception to launch.

Software Engineer Intern **Make A Difference** **June 2021 – Dec 2021**

- Designed **MongoDB** schema and developed **JavaScript(ES6)** application for efficient bug management, **reduced developer workload by 70%**.
- Collaborated with the API team to facilitate modernization efforts, migrating **scalable APIs** from REST to **GraphQL**.
- Implemented automated testing suites using Jest and Selenium, resulting in 92% code coverage.

Projects

More projects and published research information at Portfolio

Streamify - Distributed Video Streaming Platform | Python, Apache Kafka, Flask | [Github]

- Developed a scalable and fault tolerant distributed video streaming platform, with multiple workflows ensuring seamless delivery of video content.
- Leveraged Kafka's architecture to achieve parallel processing of video frames across multiple consumer instances.

Zippy - In-Memory Data Store | C++, gRPC, Multithreading | [Github]

- Engineered a scalable high-performance, gRPC-based, in-memory data store in C++, optimized for low latency.
- Implemented data durability features including snapshotting and TTL-based data expiration, ensuring robust data management and recovery capabilities.

CollabDoc - Real Time Collaborative Editing | React, Go, Websockets, Multithreading| [Github]

- Developed real-time collaboration tool in Go and TypeScript, utilizing Operational Transformation algorithm for conflict and broadcasting features for multi-user editing.
- Designed JSON-based persistence and WebSocket broadcasting to enhance collaborative document editing with low-latency updates in a scalable environment.

Achievements and Leadership

Teaching Assistant | New York University

- Guided 50+ CS students through core operating systems concepts in a graduate-level Operating Systems course.
- Developed expertise in process and memory management, file systems, and concurrency in C++ for scalable systems.

Google HashCode 2022

- Secured Global Rank 552 (amongst 10,000+ teams) and School Rank 1