Srikar Ummineni

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EDUCATION

Virginia Tech (Virginia Polytechnic Institute and State University) Virginia, US
Master of Engineering in Computer Science — CGPA: 4.0/4.0 *May 2025*
Indian Institute of Engineering Science and Technology (IIESTS) West Bengal, India
Bachelor of Technology in Information Technology — CGPA: 8.4/10 *May 2021*

SKILLS

Languages & Libraries: Python, C++, Java, C, Javascript, Typescript, Go, Dash, React, Redux, Context API

Tools & Frameworks: Nodejs, JSP, JDBC, Servlets, AWS, HTML, CSS, GDB, MongoDB, Mongoose, Express, Docker, Nextjs, Prisma, Spring Boot, Microservices, JPA, Hibernate, Kubernetes, DevOps, RabbitMQ, Kafka, Elasticsearch, NoSQL, MySQL, PostgreSQL, Redis, Angular, Django, CI/CD

WORK EXPERIENCE

Graduate Research Assistant [Link] Nov 2023 - Present
WirelessVT, Virginia Tech *Falls Church, Virginia*

- Designed and implemented optimized **Dockerfiles** for both **Angular** and **Django** components, leveraging **multi-stage builds** and **caching mechanisms** to reduce build times by 50% and minimize image sizes by 30%, resulting in more efficient deployment pipelines and faster development cycles.
- Modelling context awareness and policy adaptation **dynamic spectrum sharing** between **5G terrestrial** and incumbent networks over the **satellite bands** in **Python** using various **OOPs** and **design principles**.

Software Development Engineer 1 July 2021 - July 2023
Cadence Design Systems *Bangalore, India*

- Architected the development of **Microservices** for their **e-commerce** business, resulting in increased system scalability and a 40% reduction in maintenance costs.
- Led the implementation of secured **REST endpoints** utilizing **API versioning**, **Spring Security**, **OAuth2**, and **JWTs** leading to a 35% reduction in security vulnerabilities and a 15% increase in overall **API security**.
- Implemented data persistence using **Spring Data JPA**, **Hibernate**, along with a distributed caching system **Redis**, resulting in an 80% increase in system performance and a 90% reduction in response times.
- Built **Spring Boot scheduled tasks** to monitor missing invoices based on set parameters, integrate with notification systems (e.g., **email**, **SMS**), for **PostNord** by initiating 95% of basic claim forms automatically.
- Successfully deployed and managed **Microservices** on **AWS**, utilizing services such as **EC2**, **S3**, **Lambda**, **RDS**, **IAM**, **CloudFormation**, **CloudWatch**, **Elastic Beanstalk**, and **SQS** improving scalability and reliability.
- Utilised **Apache Kafka** to build a real-time **event-driven architecture**, enabling the system to handle 1000+ events per second.
- **Continuous Integration/Deployment Pipeline**, **pull requests**, **code reviews**, **load/stress testing**, **unit/integration/e2e testing**.

NimbleWork Mumbai, India
Full-stack Developer *July 2021 - July 2023*

- Developed a **microservice** for task management using **Spring Boot**, **Docker** and integrated it with a **microfrontend architecture** into a single, highly maintainable service, reducing deployment costs.
- Moved traditional **JSPs** to **React components** and improved runtime performance by 30%.
- Key developer in migrating legacy **JSP application** to **ReactJS components**, resulting in a 40% decrease in page load times and a 25% improvement in user responsiveness metrics.
- Collaborated with the **Licensing Management** team to develop an email sending system using **Spring Boot** and **Apache Freemarker Template**.

Crio.Do Bangalore, India
Software Engineer Intern *Dec 2020 - May 2021*

- Enhanced **"Streaks"** feature, which incentivized consistent platform usage and resulted in a 25% increase in user engagement.
- Developed a **session management system** that streamlined creation, administration, and attendance tracking. This resulted in a 40% increase in average session attendance.

RELEVANT PROJECTS

Livestream Web Application [Link] *Associated with Virginia Tech*

- A video live-streaming service with real-time chat using **web sockets**, **video player**, **followers**, **block and unblock users**, using **local tunnels**, **webhooks** and using **RTMP**, **WHIP protocols** to connect to **OBS**. Built with **Reactjs**, **Nextjs**, **MySQL**, **Prisma**.

Collaborative Real-time Whiteboard [Link] *Associated with Virginia Tech*

- A real-time whiteboard collaborating with multiple users and whiteboard from scratch with ability to draw **rectangles**, **ellipses**, **sticky notes**, and free hand **pencil drawing**. Built with **Reactjs**, **Nextjs**, **Clerk**, **Convex**, **LiveBlocks**.