

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

Key Courses: Machine Learning, Social Media Analytics, Neural Network Design, Cloud Computing, Web Application Development, Information Visualization, Operating System

Indian Institute of Engineering Science and Technology (IIST)

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 **OOPs** and **design principles**.

Software Development Engineer 1

July 2021 - July 2023

Cadence Design Systems

Bangalore, India

- Architected **cloud-native microservices** with **Spring Cloud** for the **CRM platform**, enabling dynamic scaling for high customer interactions and data processing, reducing maintenance costs by **40%**.
- Led implementation of secured **REST endpoints** with **API versioning**, **Spring Security**, **OAuth2**, and **JWTs**, reducing security vulnerabilities by **35%** and increasing **API security** by **15%**, ensuring customer data protection.
- Implemented data persistence with **Spring Data JPA**, **Hibernate**, **PostgreSQL**, and **Redis** increasing system performance by **80%** and reducing response times by **90%**, improving user experience.
- Built **Spring Boot scheduled tasks** to monitor customer interactions and follow-ups, integrating with **email** and **SMS** to automate **95%** of reminders, ensuring timely customer engagement.
- Deployed and managed **microservices** on **AWS** using **EC2**, **S3**, **Lambda**, **RDS**, **IAM**, **CloudFormation**, **CloudWatch**, **Elastic Beanstalk**, and **SQS**, enhancing scalability and reliability.
- Utilized **Apache Kafka** for an **event-driven architecture**, handling over **10000+ customer events per second**, enabling real-time updates and notifications.
- Implemented a **CI/CD pipeline** with **pull requests**, **code reviews**, **load/stress testing**, and **unit, integration, and end-to-end testing**, ensuring reliable deployments with minimal downtime.

NimbleWork

Mumbai, India

Full-stack Developer

July 2021 - July 2023

- Developed **RESTful APIs** in **Java Spring Boot**, **Oracle SQL**, **MS SQL** framework for tasks management in their project management saas for facilitating **migration** to **Microservices** based architecture and **AWS** from monolith.
- Key developer in migrating legacy **JSP application** to **ReactJS components** utilizing lazy loading, Redux, Webpack 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

- Desined and implemented **"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**.