Srija Polam

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PROFESSIONAL SUMMARY

Master's in computer science student with proven expertise in designing intelligent, scalable, and cloud-native systems. Skilled in **Python, Java, React.js, Spring Boot, AWS, and Docker**, with industry experience building GAN-based satellite image enhancement models, production-grade ML pipelines, and real-time microservices platforms. Delivered measurable impact including 30–40% efficiency gains, faster deployments, and 99.9% system uptime. Driven to leverage technical expertise in Software Engineering and AI/ML to deliver secure, high-performance, and impactful solutions.

EDUCATION

Master of Science in Computer Science: August 2024 - December 2025

University of North Carolina at Charlotte (UNCC), USA

Coursework: Data Structures and Algorithms, Database Systems, Software System Design and Implementation, Big Data Analytics, Applied AI, Computer Communication and Networks

TECHNICAL SKILLS

Programming	: Python, C, C++, Java, JavaScript, TypeScript, C#
Web and Frameworks	: HTML, Bootstrap, CSS, React.js, Redux, Node.js, Express.js, Microservices, Rest APIs,
Databases and Cloud	: MySQL, NoSQL-MongoDB, AWS, Docker
Libraries and Tools	: NumPy, Pandas, TensorFlow, Scikit-Learn, Matplotlib, NLTK, OpenCV
Platforms and Tools	: Windows OS, Linux, Ubuntu, Visual Studio
Other Concepts	: Object Oriented Programming, Software Testing, Debugging, Design Patterns, Artificial Intelligence, Machine Learning, Deep Learning, Natural Language Processing, Docker, Hadoop, Hive, Apache Spark

EXPERIENCE

Machine Learning Intern, ***National Remote Sensing Center (NRSC), ISRO - Hyderabad, India*** September 2023 - January 2024

- Engineered RS Cloud GAN, a novel GAN architecture with multi-scale feature extraction & residual connections, achieving state-of-the-art accuracy in removing cloud cover from high-resolution satellite imagery.
- Applied **adversarial training with cycle-consistency loss** and **transfer learning** on pre-trained CNNs, improving generalization and reducing training time by **30%** across diverse cloud patterns.
- Delivered scalable ML pipelines powering ISRO's **next-gen Earth observation systems**, enhancing satellite imagery quality for **large-scale geospatial analysis**.

SDE Intern, ***Sumed Technologies - Hyderabad, India*** July 2022 - August 2023

- Developed **10+ high-performance REST APIs** in Java/Spring Boot, integrating ML models into distributed systems and improving request throughput by **35%** with sub-200ms latency.
- **Processed 500K+ data records** with advanced preprocessing & feature engineering, boosting ML model accuracy by **22%** and cutting ETL pipeline runtime by **30%**.
- Deployed production-grade **ML/DL models on AWS (EC2, S3, Lambda, Docker, CI/CD)**, reducing release cycles by **40%** and achieving **99.9% system uptime**.

Artificial Intelligence Intern, ***Orbit Shifters-Hyderabad, India.*** June 2021 - September 2024

- Boosted sports analytics **prediction accuracy by 20%** by developing ML/DL models (Regression, Classification, Clustering) with TensorFlow & scikit-learn.
- Processed and cleaned **1M+ sports data points** using Python ETL pipelines (APIs + web scraping), increasing data completeness by **30%**.
- **Reduced deployment time by 25%** with Dockerized ML workflows and implemented real-time monitoring via MLflow & Matplotlib for **early drift detection.**

KEY PROJECTS

Spring Boot Banking Application | ***Java, Spring Boot, Spring Data JPA, MySQL, IntelliJ IDEA, Postman, RESTful APIs, Spring Security***

- Developed a full-stack banking application using Spring Boot, Java, and MySQL.
- Implemented features including account opening, deposit, withdrawal, listing all accounts, and retrieving account details by ID.
- Utilized RESTful APIs for communication between the front end and back end.

End-to-End Poultry Disease Detection & Classification with MLOps | ***Python, TensorFlow, OpenCV, DVC, Docker, AWS, Azure, CI/CD, REST APIs***

- Developed Built a complete deep learning pipeline for poultry disease detection, achieving **92% classification accuracy** using CNNs and image preprocessing.
- Integrated DVC for experiment tracking, Docker for reproducibility, and automated **CI/CD deployment on AWS & Azure**, reducing deployment time by **35%**.

Real-Time Microservices Chat Application | ***MERN, React.js, RabbitMQ, Socket.IO, Redis, AWS, Docker, TypeScript***

- Engineered a scalable real-time chat platform with MERN stack, React.js UI, RabbitMQ microservices, and Socket.IO messaging, supporting 1,000+ concurrent users with <200ms latency.
- Reduced Optimized performance with Redis caching and Dockerized deployments on AWS, reducing response times by 35% and ensuring high availability with production-grade scalability.