

EDUCATION

The University of Memphis

Aug 2024 – May 2026

Memphis, TN, US

Master of Science in Information Technology

Academic Achievements:

- Engineering GPA: 4/4 (A+)
- Coursework: Machine Learning, Generative AI, Information Systems Security, Software Engineering

WORK EXPERIENCE

Research Intern

ISRO

Jan 2024 – Apr 2024

- Engineered a DL prototype to detect ships and oil spills from SAR satellite imagery using Neural Networks
- Created modular training pipeline in Python with **GPU acceleration** and live visualization using **TensorBoard**
- Initiated as a joint innovation challenge under ISRO's Earth Observation division
- The project evolved into a proposal for integration with coastal surveillance platforms with DRDO

Research Assistant

University of Memphis

Apr 2025 - Present

- Developed a GPT-4 based chatbot to guide executives through US AI regulations using FastAPI and Firebase
- Integrated **BERT** embeddings and **FAISS** to match legislation with user profiles by sector, size, and geography
- Designed smart onboarding flows, prompt-tuned response logic for personalized regulatory training
- Currently piloting the chatbot with academic and enterprise users

Java Backend Intern

Slash Mark

Feb 2024 – May 2024

- Developed REST APIs using Spring Boot + MySQL
- Implemented secure JWT-based authentication & role-based access
- Deployed Dockerized microservices on Heroku with CI/CD (GitHub Actions)

Software Engineer Intern

BlackBuck

May 2024 – Aug 2024

- Engineered a scalable backend microservice architecture using **Spring Boot** and **Kafka** to handle event
- Developed internal APIs to support logistics coordination for 1,000+ users across web and mobile platforms
- Implemented automated deployment workflows using Docker, GitHub Actions, and AWS EC2

PERSONAL PROJECTS

- **AI Regulation Chatbot.** GPT-4 chatbot using FastAPI & Firebase to guide executives on AI laws across U.S. states. Integrated BERT + FAISS for legal text matching and Gemini for summarization.
- **Enterprise Document Processor.** OCR-based platform built with Spring Boot, Kafka, AWS S3, and BERT for extracting entities from scanned PDFs. Used JWT-secured APIs and Dockerized microservices.
- **Drone Vision Object Detection.** Aerial object detection system using **GLSAN + YOLOv5** to identify vehicles and infrastructure in drone footage. Benchmarked against CNNs with **20%** mAP gain.
- **Java HR Microservice.** Spring Boot + MySQL REST API for HR operations with **JWT** login, **Swagger UI**, and CI/CD via GitHub Actions.

AWARDS

- **Top 1% Performer ISRO Research Cohort (2024):** Recognized for developing a YOLOv5-based oil spill detection system used in SAR imagery analysis.
- **Dean's List University of Memphis (2024, 2025):** For consistent academic excellence with a 4.0 GPA in the MS MIS program.

SKILLS

- Java (Object Oriented Programming), Python (AI, ML, DS), C, R, JavaScript, HTML/CSS
- SQL, GIT, PostgreSQL, Agile Methodology, Data Structures, Algorithms