

# CHARANI SRI VEERLA

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## EDUCATION

### Master of Science in Computer Science

Aug 2023 – May 2025

*The University of Alabama at Birmingham (UAB), United States*

CGPA: 4.0

- **Relevant Coursework:** Deep Learning, Operating Systems, Distributed Systems, & Advanced Algorithms Applications
- **Graduate Teaching Assistant:** Machine Learning & Software Engineering [Jan 2024 – May 2025]

## EXPERIENCE

### The University of Alabama at Birmingham

Jul 2025 – Present

*Software Development Engineer — AI Researcher at UAB Heersink School of Medicine*

*Birmingham, United States*

- Built LLM-based chat assistant using LangChain to answer clinical queries over embedded Electronic Health Records.
- Orchestrated multi-agent workflows for summarization, triage, and verification; improved output consistency by 30%.

### The University of Alabama at Birmingham

Dec 2023 – Apr 2024

*Software Development Engineer — Research Analytics Intern*

*Birmingham, United States*

- Designed a data-driven tracking system to monitor 120+ athletes' performance trends across sessions for coaching staff.
- Built automated data ingestion pipelines in Python and SQL with schema enforcement, improving throughput by over 40%.
- Developed RBAC-enabled Power BI dashboards using DAX, automating insights and reducing manual reporting by 70%.

### Cognizant

Feb 2022 – Jul 2023

*Software Development Engineer — Application Development & Maintenance Team*

*Hyderabad, India*

- Enhanced OneCognizant employee portal UI using React.js, improving responsiveness by 35% for 300K+ global employees.
- Developed scalable Spring Boot microservices with JWT supporting high-volume operations across distributed systems.
- Optimized MySQL database queries and implemented Redis caching strategies decreasing API response times by 40%.
- Streamlined CI/CD pipelines using Jenkins and Docker on AWS EC2, reducing release time from 2 days to 4 hours.
- Automated Terraform-based provisioning on AWS, creating reusable IaC templates for consistent deployments.
- Refactored monolithic applications into modular Spring Boot microservices using TDD achieving 90% unit test coverage.

### Cognizant

Jul 2021 – Feb 2022

*Software Development Engineer — Java Full-stack Engineering Intern*

*Hyderabad, India*

- Supported backend feature development using Java, Spring MVC, and REST APIs on internal enterprise platforms.
- Created modular UI components in JavaScript and CSS, integrating with backend endpoints for seamless user flows.
- Resolved 60+ JIRA issues across Agile sprints and assisted QA in validating fixes during pre-production cycles.

### EPAM Systems

Sep 2020 – Jun 2021

*Software Development Engineer — Java Full-stack Engineering Intern*

*Remote*

- Developed CLI-based Java tools using layered architecture and OOP principles, improving task automation and reusability.
- Built Selenium and JUnit test suites, increasing code coverage by 40% and reducing manual QA time during sprints.
- Created SRS and UML artifacts, peer-reviewed Git-based code, and supported Agile sprint planning and testing workflows.

## TECHNICAL SKILLS

**Languages:** Python, Java, SQL, JavaScript, TypeScript, R, C, C++, Bash, HTML, CSS

**Frameworks & Libraries:** Spring Boot, React.js, FastAPI, Angular, Node.js, Hibernate, JUnit, Mockito

**AI/ML:** Scikit-learn, TensorFlow, PyTorch, Pandas, NumPy, OpenCV, LangChain, NLTK, LLMs (GPT, Claude)

**Cloud & DevOps:** AWS (EC2, S3, Lambda, RDS, IAM, EKS, CodeDeploy, API Gateway), Docker, Kubernetes, Terraform

**CI/CD & Tools:** Jenkins, GitHub Actions, Git, GitLab, Postman, Swagger, Jira, Confluence, Selenium

**Databases:** MySQL, PostgreSQL, MongoDB, Redis, DynamoDB, SQLite, Oracle

**Visualization & Analytics:** Power BI, Tableau

## PROJECTS

**CNN – based Pediatric Bone Age Assessment** | Python, ResNet, DenseNet, OpenCV [🔗 GitHub](#)

Jan 2025

- Fine-tuned ResNet-50 and DenseNet-121 on grayscale X-rays using transfer learning; achieved 91.2% accuracy.

**U-Net Based Lung Segmentation** | Python, Keras, U-Net, OpenCV [🔗 GitHub](#)

Aug 2024

- Achieved 91% Dice score on chest X-ray segmentation using U-Net with post-processing for mask precision.

**Employee Management System** | Spring Boot, React.js, MySQL, JWT, Docker, REST APIs [🔗 GitHub](#)

Jan 2024

- Built a dynamic, secure, containerized full-stack system with JWT authentication, CRUD APIs for employee operations.

## CERTIFICATIONS

- AWS Certified Cloud Practitioner – Issued in July 2025, AWS Certified Solutions Architect (In-progress)
- Machine Learning Specialization — *DeepLearning.AI*