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 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 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 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 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 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, GitHub, 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*