Raviteja Avutapalli

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EDUCATION

The University of Texas at Arlington, *Master of Science in Computer Science* August 2023 – May 2025

Jawaharlal Nehru Technological University, *Bachelor of Technology in Computer Science* June 2015 – May 2019

TECHNICAL SKILLS

Languages: Java, Python, JavaScript, C, HTML5, CSS3, XML, R

Databases: SQL, Oracle, MySQL, PostgreSQL, Microsoft SQL Server

Frameworks & Libraries: Spring, React.js, Node.js, OpenCV, Apache Spark, Django

DevOps & Tools: Git,GitHub,IntelliJ IDEA,VS Code, Eclipse, Jupyter, Colab, Postman,Jira, Jenkins, Docker, Kubernetes, CI/CD

Software Development: SDLC, Agile (Scrum, Kanban), OOP,Unified Modeling Language(UML) Data Structures & Algorithms, DBMS

AI & ML: Machine Learning, Deep Learning, Computer Vision, NLP

PROFESSIONAL EXPERIENCE

Infor, *Software Development Engineer* May 2022 – July 2023

- Developed **Infor COLEMAN-AI**, an AI-powered workflow automation platform, boosting team efficiency by **20%** by streamlining workflows and reducing manual intervention.
- Optimized backend code by **12.5%** for better readability and maintainability while reducing system errors by **25%** through refined CRUD operations. These improvements enhanced system reliability and aligned with UI team requirements.
- Led JUnit testing efforts, achieving **90%+ code coverage** through comprehensive test cases, strengthening system reliability and performance.

Tata Consultancy Services, *Systems Engineer - Java Web Developer* July 2020 – April 2022

- Executed comprehensive web application strategies for the **IFTAS banking platform**, employing Java/J2EE, Spring Framework, and front-end technologies, **increasing data processing speed by 40%**.
- Managed use cases, functional specifications, and business analysis, ensuring project alignment with client requirements and **reducing project delivery time by 15%** through streamlined documentation and knowledge transfers.
- Applied Agile and Waterfall methodologies, improving project efficiency and **increasing client satisfaction by 20%** through structured development cycles and iterative feedback.

Tata Consultancy Services, *Assistant Systems Engineer - Tester* July 2019 – June 2020

- Collaborated on the **Canadian Imperial Bank of Commerce (CIBC)** project, streamlining banking processes and reducing transaction errors by 10%.
- Diagnosed and resolved **100+ software bugs**, reducing re-testing cycles by 3**0%.**
- Refactored system efficiency by **50%** through cross-team collaboration, user requirement analysis, and performance optimization while maintaining documentation for **200+ system design files** to improve traceability and **future scalability**

ION Technology Solutions, *Student Internship* December 2018 – April 2019

- Devised a high-fidelity facial gesture recognition algorithm, cutting response time delays by 40% through feature extraction optimization and resolution of the top three performance bottlenecks
- **Extracted features with the Local Binary Pattern (LBP) operator** and **expanded detection efficiency by 30%** through the integration of a Haar Cascade classifier for better feature recognition.
- Processed **100+** lip gesture samples using OpenCV, developing and refining a machine learning model with potential for hardware integration to enhance assistive technology and human-computer interaction.

PROJECTS

Personalized Fitness Tracker with AI-Based Insights

- Engineered an AI-driven fitness tracking platform using React, Next.js, and AWS, enhancing UI/UX to improve responsiveness and reduce load times by **30%**, leading to a smoother user experience.
- Designed a scalable database and deployed the system on AWS, ensuring **99.9% uptime** and handling **10K+ logs** with **Next.js APIs**.

Interpreting Attention Models with Human Visual Attention in Machine Reading Comprehension

- Analyzed **neural attention mechanisms (LSTM, CNN, XLNet)** by conducting eye-tracking experiments **on 100+ samples**, demonstrating **80%** alignment between XLNet and human visual attention through KL divergence and cosine similarity metrics.
- Elevated AI models by introducing attention visualization techniques, cutting ambiguity in attention mapping by **25%**, and enhancing explainability for deep learning applications.

Heart Disease Prediction Using Machine Learning Models

- **Tested Decision Tree, Random Forest, SVM, Naïve Bayes, and Regression models**, with **Decision Tree achieving 90.11% accuracy** by optimizing feature selection.
- **Identified chest pain type and blood sugar levels as key predictors**, **boosting model accuracy by 15%** through data analysis and feature engineering.

Stock Recording System – Software Project Management

- **Defined project scope and feasibility using SDLC methodologies**, **reducing requirement misalignment by 35%** and accelerating project execution by **20%**.
- **Calculated cost estimates using the COCOMO model**, **improving budget forecasting accuracy by 25%** and optimizing resource allocation, leading to a **15% reduction in development costs**.

PUBLICATIONS

Conversion of Lip Gestures into Text using Machine Learning Model