Muskan Arora

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EDUCATION

Master of Science in Computer Science (University of Texas at Arlington; GPA: 3.67/4) **Aug 2023 – May 2025**

Coursework: Advanced Software Engineering, AI, Data Mining, Project Management, Distributed Systems, Web Data Management

Bachelor of Engineering in Computer Science (The NorthCap University, Gurgaon; GPA: 3.7/4) **Jul 2018 - Jun 2022**

PROFESSIONAL EXPERIENCE

AI Platform Developer | University of Texas at Arlington **Aug 2025 – Present**

- Developed a **Streamlit-based** web app using **Python**, integrating **NLP (Stanza)** and **text to speech (gTTS)** to analyze grammar and generate real-time pronunciation feedback.
- Implemented **comic builder, glossary generator, and exercise engine modules** with dynamic **JSON** workflows enabling students to create personalized Latin portfolios with AI assistance.
- Leveraged usage **data analytics** to measure student engagement, automated content export workflows using ReportLab for PDF generation and optimized feedback models, enhancing comprehension for beginners by 25%.
- Collaborated with academic mentors to align AI feedback with instructional goals, emphasizing accessibility and interactive learning.

Software Development Engineer | Bitxia Tech Private Limited **Aug 2021 – Aug 2023**

- Designed **technology solutions** including 30+ interactive KPI dashboards with **Angular** and **AG Grid**, cutting load times by 30% and accelerating funding decisions for startup clients.
- Translated **business problems** into **technical designs** for real-time financial data to Angular-based UI by designing and deploying **Spring Boot REST APIs** seamlessly connected with Oracle databases, using Git for version control.
- Built SQL pipelines to automate KYC, credit scoring, and loan approvals by integrating Digio, Karza, and Mifos APIs, reducing onboarding time from days to hours and incorporated JUnit to reduce resolution time by 38%.
- Reduced post release downtime by **56%** through a robust **Docker** based recovery process and designed **data pipelines** integrating APIs and databases, ensuring data quality, lineage, and real-time synchronization for financial reporting.
- Scaled Stride One's (FinTech) platform to handle **$5B** in annual startup financing and **150,000+** invoices, processing **multi-dimensional transactional datasets** with **load balancing,** and **fine-tuning database indexing.**

Software Developer | Evren Global Solutions **Jun 2021 – Aug 2021**

- Collaborated with **client stakeholders to d**eveloped a scalable Directory Platform using **Node.js**, focusing on responsive UI implementation and **CI/CD** integration which improved client onboarding time by 22%.
- Designed and launched a user-friendly matrimonial platform with reporting capabilities, achieving a 98% customer satisfaction rate through intuitive **UX** design and built an internal employee management system using **HTML, CSS, and Node.js**.

Flutter Developer | Blondwaves-ILMURO **May 2020 – Aug 2020**

- Collaborated with UX/UI designers to deliver cohesive user experiences, resulting in an 18% increase in user retention and a 23% reduction in bounce rates.
- Developed key features for a mobile application using **Flutter** that enhanced user satisfaction, leading to a 30% increase in app ratings and 17% rise in daily active users.

TECHNICAL SKILLS

Languages: Java, Python, GoLang, JavaScript, TypeScript, Node.js, HTML **Tools & Cloud:** Jira, Git, Docker, Kubernetes, AWS, GCP

Methods: Agile, SDLC, Microservices Architecture, RESTful APIs, CI/CD **Databases**: MySQL, Oracle

AI & GenAI: NLP (Stanza), Text-to-Speech (gTTS), HITL workflows **Web:** Angular, Flutter, Spring Boot, REST Apis, J2EE

ACADEMIC PROJECTS

Distributed Consensus Engine (Raft & 2PC) | Go, Python, Node.js, gRPC, Docker

- Architected a fault-tolerant distributed system implementing the **Raft Consensus Algorithm** and **Two-Phase Commit (2PC)** protocol to ensure data consistency across node clusters.
- Developed the **Log Replication** module using **Go**, enabling leaders to synchronize entries with follower nodes via **gRPC** AppendEntries calls.
- Implemented **Leader Election** logic in Python, utilizing randomized timeouts and heartbeat mechanisms to handle node failures and maintain cluster stability and designed a unified raft.proto definition to standardize message formats across polyglot services (Python, Go, Node.js) and orchestrated the multi-node environment using **Docker Compose**.

Conference Management System | React, Express, Node.js, REST APIs

- Architected a full-stack application for managing academic paper submissions using React for the user interface and Express.js for the backend API layer and implemented secure JWT authentication and dynamic data handling to support live conferencing features.
- Managed the project lifecycle using Jira and Waterfall methodology, ensuring timely delivery of key UI features.

CERTIFICATIONS

- Google Project Management Certification **2025**
- HackUTA Hackathon **2024**