

Muskaan

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EDUCATION

Master of Science, Computer Engineering <i>Arizona State University</i>	Aug 2024 – May 2026 <i>Tempe, Arizona</i>
Bachelor of Technology, Computer Science and Engineering <i>Vellore Institute of Technology</i>	Sept 2020 – May 2024 <i>Vellore, India</i>

SKILLS

Programming Languages: Python, C++, Java, JavaScript, SQL, R, Bash, MATLAB
Systems & Software Engineering: Data Structures, Algorithms, Client-Server Architecture, Concurrent Processing Concepts, Distributed Systems Fundamentals, Secure Software Design Principles, Performance Optimization
Cloud & Infrastructure: Linux, AWS (EC2, S3), Azure, Docker
Databases & Data Systems: MySQL, PostgreSQL, MongoDB, Data Modeling, Query Optimization, ETL Pipelines
Tools & Development: Git, GitHub, CI/CD, Agile (Scrum), REST APIs, Testing, Debugging, Code Reviews
Data & Analytics: Pandas, NumPy, Matplotlib, Power BI, Statistical Modeling, Machine Learning Fundamentals

PROFESSIONAL EXPERIENCE

Graduate Research Assistant – Software / Data Systems Engineering <i>Arizona State University, Global Institute of Sustainability & Innovation</i>	Oct 2025 – Present <i>Arizona, USA</i>
<ul style="list-style-type: none">Developed automated distributed data collection services using Python, Flask, and REST APIs enabling reliable real-time ingestion of environmental datasets.Engineered backend ETL workflows using Pandas, NumPy, and SQLAlchemy supporting large-scale data transformation across distributed research database systems.Designed scalable database architectures improving query performance and data retrieval latency for high-volume environmental datasets.Built monitoring dashboards using Power BI and Matplotlib enabling real-time system observability and performance tracking.Applied secure data handling and access control concepts for sensitive environmental and infrastructure datasets.Collaborated in Agile environment using Git for version control, code reviews, and reproducible pipeline deployments.	
Frontend Software Engineering Intern <i>AssetPlus Consulting</i>	Feb 2024 – May 2024 <i>Noida, India</i>
<ul style="list-style-type: none">Developed responsive web applications using React.js, JavaScript, HTML, and CSS improving application performance and cross-platform compatibility.Designed reusable UI components and modular frontend architecture supporting scalable enterprise dashboards for 200+ users.Optimized frontend performance using efficient API consumption, state management improvements, and lazy loading techniques reducing latency by ~25%.Integrated REST APIs and JSON data pipelines ensuring reliable client-server communication and data consistency.Participated in Agile SDLC including sprint planning, debugging sessions, code reviews, and production deployment support.	
IoT Data Analysis Intern <i>Mutelcor GmbH</i>	May 2023 – Jul 2023 <i>Delhi, India</i>
<ul style="list-style-type: none">Built scalable data pipelines processing daily IoT sensor readings supporting real-time monitoring and analytics workflows.Developed Python-based analytics and ML models for anomaly detection and predictive device failure analysis improving system reliability.Designed automated monitoring dashboards and alerting systems enabling infrastructure monitoring and operational insights.Performed end-to-end testing, debugging, and QA validation across IoT devices ensuring data integrity and production stability.	

PROJECTS

ServiSecure: Automated Alert System for Vehicle Servicing	Jan 2025 – Mar 2025
<ul style="list-style-type: none">Built automated vehicle service monitoring system using Python backend and Twilio API integration for real-time SMS notifications.Implemented computer vision pipeline using OpenCV and Tesseract OCR for license plate recognition and validation.Designed MySQL relational database supporting transactional vehicle service lifecycle tracking.Implemented modular backend services following client-server design architecture.	