

Sudipti Sharma

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Software Engineer

EXPERIENCE

Software Engineer – Data & Analytics

June 2023 - Present

General Motors

Las Vegas, NV

- **Data Transformation:** Engineered enterprise analytics applications in **Databricks Dash (Python, SQL)**, automating 20+ manual Excel workflows; reduced analysis time from hours to seconds and **recaptured 150+ engineering hours/month**.
- **Pipeline Engineering:** Automated data migration from PostgreSQL to **Databricks Delta Lake** using **Spark SQL**, implementing rigorous schema validation and regression testing to achieve **100% data reliability** for downstream reporting.
- **Predictive Modeling:** Designed an interactive scenario modeling engine for subfunction-level simulations, enabling stakeholders to dynamically assess impacts and generate **real-time aggregated capacity forecasts**.
- **Full-Stack Optimization & Validation:** Developed end-to-end analytics tools (**Python, React, Bash, Linux**) to diagnose sensor inconsistencies, **increasing QA throughput by 50%** and eliminating **15+ hours of manual weekly labor**.
- **Embedded Systems Diagnostics:** Architected full-stack tools to automate **ADAS routing analysis and sensor validation**, providing engineers with real-time UI-driven workflows to trace data flow and identify anomalies.
- **System Reliability Engineering:** Debugged complex, cross-platform issues spanning embedded software, vehicle sensors, and data pipelines; engineered custom visualization tools and test scripts to significantly improve system maintainability.
- **QA Automation:** Streamlined **LiDAR/camera alignment and CAN/Ethernet validation** for 12+ data-collection vehicles, converting manual processes into repeatable automation and **increasing testing throughput by 50%**.
- **Technical Leadership:** Orchestrated cross-functional collaboration between embedded, data, and QA teams to integrate software components; facilitated code reviews and UAT, consistently reducing rework cycles and accelerating delivery.

Software Developer

Sept 2021 - May 2023

UNLV-Forest Inventory and Analysis (FIA)-USDA

Las Vegas, NV

- **Web Development:** Enhanced embedded web tools (DATIM/EVALIDATOR) using **C#, ASP.NET and SQL** for USDA analysts.
- **Performance & QA:** Conducted low-level data handling and performance optimizations, ensuring stable releases through rigorous TDD and debugging.
- **Accessibility:** Improved **Section 508 compliance** using NVDA/ANDI tools, ensuring inclusive design for embedded interfaces within 5 months.
- **Hardware/Software Integration:** Collaborated on resolving platform issues involving **ARM-based architectures** and firmware concepts.

Full Stack Intern

September 2021 - May 2023

Townsquare Interactive

Remote

- Created full-stack website using React, Node.js, MongoDB, Django, Bootstrap; approved as internal use case, demonstrating full-stack development capabilities.

EDUCATION

Masters - Computer Science

- 2027

Georgia Institute of Technology

B.S. - Computer Science

- 2022

University of Nevada Las Vegas

SKILLS

Programming Languages Python, SQL, C++, C#, Java, TypeScript, Bash

Web Development & Frameworks React, Next.js, Node.js, Flask, ASP.NET, REST APIs, React Native, Expo

Data & Databases Databricks, Spark SQL, Delta Lake, PostgreSQL, MySQL, Oracle, Firebase, Data Transformation, Data Pipelines, Data Migration

Cloud & DevOps Docker, CI/CD, Airflow, Firebase

Operating Systems Linux, Windows, MacOS

Embedded Systems & Hardware ADAS, LiDAR, Camera Alignment, CAN/Ethernet Validation, Embedded Software, Vehicle Sensors

Testing & Quality Assurance TDD, QA Automation

Soft Skills Problem Solving, Communication, Cross-Functional Collaboration, Creativity, Requirements Analysis, Stakeholder Management, Technical Leadership

PROJECTS

KaizenPal

AI Productivity App | React Native, Expo, Firebase, OpenAI

- Built a cross-platform app featuring **AI-generated suggestions** and personalized motivational quotes using **OpenAI models**.
- Implemented Firebase Auth/Firestore and Expo notifications for a dynamic user experience.

Full-Stack Social Media Platform

Next.js, TypeScript, Node.js

- Developed a high-performance platform featuring user authentication, real-time chat, and optimized media uploads.

Portfolio

- Built using Next.js + TypeScript and deployed via Vercel.

2D Game

Developed a 2D shooting game in C++ on a Linux environment, incorporating obstacles, enemies, and coins, while using N-curses for a GUI-like experience and debugging to resolve issues.