Aditya Singh

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SUMMARY

Computer Science student at Arizona State University with strong expertise in full-stack development and data engineering. Proficient in **Java, Python, Node.js**, and **SQL**. Experienced in building scalable **SaaS** platforms, managing **CRM-style** databases, and integrating **Generative AI** solutions. Seeking to leverage skills in RESTful API design and agile software development.

EDUCATION

Arizona State University   Tempe, AZ
B.S. Computer Science — GPA: 3.99/4.00 — Dean's List: 7 consecutive semesters   *Expected May 2026*
Relevant Coursework: Data Structures & Algorithms, Database Management, Artificial Intelligence, Software Engineering, Operating Systems.

TECHNICAL SKILLS

Languages: Java, Python (Pandas, NumPy), JavaScript/TypeScript, SQL, C/C++, Bash, HTML/CSS
Backend & Databases: Node.js, Express.js, Spring Boot, PostgreSQL (Supabase), MySQL, MongoDB, RESTful APIs
Frontend & UI: React.js, Tailwind CSS, Streamlit, JavaFX, Radix UI
AI & Data: Generative AI (LLMs), LangGraph, OCR (Tesseract), ETL Pipelines, Data Visualization
DevOps & Tools: Git, Docker, CI/CD, Linux/Unix, Postman, Agile/Scrum Methodologies

EXPERIENCE

Software Engineering Intern   August 2025 – December 2025
Qualaces (Core AI Team)   *Tempe, AZ*

- Built a **HIPAA-compliant SaaS platform** using **React, TypeScript, and Node.js**, streamlining home-health documentation and reducing manual entry time.
- Engineered data ingestion pipelines using **OCR (Tesseract.js)** to extract unstructured medication data, transforming it into structured **SQL** formats for downstream analytics.
- Managed a scalable **PostgreSQL** database via Supabase, implementing complex schemas, **Row Level Security (RLS)**, and RBAC to ensure data integrity and security.
- Collaborated with cross-functional teams in an **Agile** environment to integrate dashboard analytics for clinician performance monitoring.

Software Engineering Intern   June 2025 – August 2025
Attackfence Techlabs   *Remote*

- Designed and maintained a relational database schema (**MySQL**) to support a performance evaluation CRM portal, handling records for 100+ employees.
- Developed 4 distinct role-based dashboards (Employee, Manager, HR, Admin) to improve workflow efficiency and visualize performance metrics, aiding data-driven decision-making.
- Optimized backend queries in **Python** to handle high-volume data retrieval, ensuring low-latency reporting for real-time user interactions.
- Implemented secure authentication with brute-force prevention, ensuring the safety of sensitive employee data.

Software Engineering Intern   March 2025 – May 2025
Aubot   *Remote*

- Refined **Java** and **Python** data structures curriculum, creating automated test cases for student code submissions.

- Analyzed student performance data to identify curriculum bottlenecks, improving material clarity by 15%.
- Collaborated with content teams to refine instructional materials, accelerating platform integration by 20%.

Projects

MigrateMate (AI Code Migration Platform)   Jan 2026 – Present

Python, FastAPI, Next.js, Docker, Gemini 2.0, Neo4j, Redis

- Engineered a "neuro-symbolic" code modernization tool using **Google Gemini 2.0 Flash** and **AST parsing** to automate the conversion of legacy **Flask** applications to **FastAPI**.
- Architected a containerized full-stack solution (**Docker Compose**) integrating **PostgreSQL**, **Redis**, **Qdrant** (Vector DB), and **Neo4j** (Graph DB) to support context-aware RAG analysis.
- Developed a **Next.js 14** and **TypeScript** frontend featuring a live Monaco Editor and diff-viewer for real-time code review.
- Implemented automated pattern recognition for async I/O optimization, Blueprint-to-APIRouter conversion, and **JWT** security upgrades.

Campus Hive | *Java, JavaFX, MVC Architecture*   Fall 2024

- Built a collaborative desktop learning platform featuring Q&A forums to enhance student interaction.
- Implemented **Object-Oriented Design** principles and **MVC architecture** to manage application state and ensure separation of concerns, ensuring code maintainability.

Self-Evaluation Portal (DABProm) | *Python, Streamlit, MySQL*   Summer 2025

- Built a full-stack data application using **Streamlit** to collect and visualize performance metrics.
- Implemented Role-Based Access Control (RBAC) to secure sensitive data within the **MySQL** database.