

MUFADDAL RAJKOTWALA

(858) 504-0901 | mrajkotwala@ucsd.edu | linkedin.com/in/mufaddal-rajkotwala | github.com/Muffi7869 | San Diego, CA

EDUCATION

University of California, San Diego

San Diego, CA

B.S. Mathematics – Computer Science | Minor: Data Science

Aug. 2025 – Jun. 2029

- **Relevant Coursework:** Object-Oriented Programming (Java) · Data Structures (Linked Lists, Stacks, Hash Tables, Trees) · Probability & Random Variables · Proof Techniques & Induction · Linear Algebra · Multivariable Calculus · Statistical Inference & Data Visualization

RMG Maheshwari English School

Gujarat, India

Grade 12, CBSE | Head Boy

2023 – 2025

- **Relevant Coursework:** Python Programming · SQL & Databases · Calculus (Differentiation & Integration) · Matrices & Determinants · Probability

PROJECTS

PulsePay – Hospital Payroll Platform | *Next.js, TypeScript, PostgreSQL (Supabase), Cloudflare Workers*

2026

- Built and sold a payroll web app to **3 hospitals**, automating monthly payroll for **150+ employees** that was previously calculated by hand.
- Designed a multi-tenant PostgreSQL database with row-level security so each hospital's data stays isolated on one shared platform.
- Automated attendance file parsing, salary calculation, deductions, audit logging, and Excel payroll export.

AXIOM – Defense Supply Chain Attack Simulator | *React, TypeScript, React Flow, Vite, Vitest* | [GitHub](#)

May 2026

- Built a supply chain attack simulator at the **Bow Capital Defense Hackathon** (36 hours) for a 100-drone military deployment.
- Implemented a graph-based breadth-first search engine that shows how one compromised vendor spreads across a 25-node supply chain.
- Simulated a real firmware attack (CVE-2024-3094) dropping mission readiness from 92% to 54%, and a recovery plan restoring it to 81%.

Hospital Revenue Analytics Dashboard | *Python, SQL, pandas, Plotly, Streamlit*

In Progress

- Building an analytics dashboard for a multi-specialty hospital that turns monthly P&L and billing exports into revenue, cost, and margin trends.
- Breaking down revenue by department and payer mix (cash, private insurance, Ayushman Bharat) to find the most profitable service lines.

TECHNICAL SKILLS

Languages: Python, TypeScript, JavaScript, SQL, Java, HTML/CSS

Frameworks & Libraries: React, Next.js, React Flow, pandas, Plotly, Streamlit, Vitest

Databases & Cloud: PostgreSQL, Supabase, Cloudflare Workers

Concepts: Full-Stack Web Development, Multi-Tenant Architecture, Row-Level Security, Graph Algorithms (BFS), Data Analysis & Visualization, Object-Oriented Programming

Tools: Git, GitHub, Vite, VS Code, Claude Code, OpenAI Codex

LEADERSHIP & EXTRACURRICULARS

Head Boy

May 2024 – May 2025

RMG Maheshwari English School

Gujarat, India

- Elected by faculty and peers to represent **600+ students**; main liaison between students and administration.
- Planned and ran **15+ school-wide events** end to end, coordinating student teams, faculty, and vendors.

Volunteer – Education & Mentorship

Jan. 2022 – May 2025

Lions Clubs International

India

- Logged **500+ hours** teaching academic subjects and music to children from diverse backgrounds, with mentorship relationships lasting 3+ years.

Tabla Performer

Mar. 2017 – Present

Percussion Academy

Surat, India

- 9+ years of training in Indian classical percussion; earned state and national certifications and performed at 10+ public events.

HONORS & AWARDS

2nd Place, Java AI Tournament | UC San Diego, 200-student Object-Oriented Programming course

Jun. 2026