Rohan Madan

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Education

University of California, San Diego Expected Graduation: Jun 2027
Bachelors of Science in Computer Science *GPA: 3.85*

MiraCosta College Graduated: May 2025
Associates of Science in Computer Science & Math *GPA: 3.97*

Relevant Coursework: Advanced Data Structures and Algorithms, Object Oriented Programming, Discrete Structures, Linear Algebra, Multivariable Calculus, Web Development, Software Engineering, Computer Architecture

Experience

Moebius Solutions, Inc. Jun 2025 – Present
Software Engineering Intern *San Diego, CA*

- Designed a scalable DIMEFIL conflict simulator with 20+ FastAPI endpoints and AI-driven opponent logic, tripling scenario capacity to 200+ complex multi-nation conflict scenarios, cutting average API response times by 35%, and enabling advanced geopolitical analysis to predict and mitigate international crises
- Launched a debugging dashboard, integrating WebSocket and API tracing, real-time state logging, and automated health checks, cutting debugging time by 50% across 2K simulation runs and reducing production defects by 20%

Tech Mahindra Nov 2024 – Feb 2025
Software Intern *San Diego, CA*

- Developed an automated Python script using pandas and python-docx to extract and analyze 1000+ mobile device test cases from Excel, generating performance tables, throughput charts, and comprehensive analytical reports
- Accelerated testing processes by 75%, completely eliminating manual data entry and improving operational efficiency across testing teams through streamlined workflows and real-time performance monitoring

NASA Community College Aerospace Scholars Aug 2024 – Nov 2024
Software Specialist *Remote*

- Architected mission control systems and data pipelines for lunar rover simulation using OpenMCT, implementing encrypted transmission protocols and autonomous decision algorithms for a 10 member cross-functional team
- Designed cybersecurity infrastructure and error handling systems for lunar operations, ensuring secure data packet transmission and real-time system health monitoring across Earth-Moon communication links

ECE Internship Program Jun 2024 – Aug 2024
University of California, San Diego *San Diego, CA*

- Developed a functional assistive smart cane prototype integrating ultrasonic proximity sensors with 20cm detection range and real-time instant audio feedback alerts, leveraging CircuitPython programming, custom PCB design, and 3D CAD modeling to enhance mobility for visually impaired individuals
- Led hardware integration and testing processes, utilizing Eagle for PCB design, OnShape for mechanical modeling, and Tinkercad for circuit prototyping and validation to deliver a cost-effective accessibility solution

Projects

ACM Hack Project May 2025 – Present

- Designed and developed a full-stack social media web app to connect 1,000+ UCSD students through club event discovery, interactive campus maps, and real-time geolocation of student-led activities
- Built scalable APIs and integrated Firebase Auth, Google Maps API, and AWS Personalize to support secure authentication, personalized recommendations for campus activities, and real-time activity tracking

Eventory - DiamondHacks at UCSD Apr 2025

- Engineered an AI-powered Discord bot that monitors 100+ student servers, extracting academic and club-related events from natural language messages using Google Gemini API, and displays them in a searchable, categorized calendar React & Tailwind web app, streamlining event discovery and boosting club engagement by 50%
- Deployed a secure FastAPI backend with JWT authentication and MongoDB integration to store, normalize, and classify structured event data, reducing manual tracking efforts by over 70%

Poker Buy-In App Jan 2025 – Apr 2025

- Developed a full-stack poker buy-in app with Next.js, Firebase, and Stripe to automate poker game buy-ins, rebuys, and winnings distribution, eliminating manual calculation and payout errors completely
- Reduced payout processing time by 80% through automation and real-time synchronization

Stock Market Predictor Nov 2024

- Developed a stock market prediction model using Python and scikit-learn, implementing a Random Forest classifier to forecast S&P 500 trends by analyzing historical data across 2 to 1000-day horizons
- Enhanced model performance through feature engineering (rolling averages and trend indicators) to achieve a 58% precision score, and optimizing models through back-testing and probability threshold tuning

Skills/Additional

Languages: Java, Python, C++, JavaScript, HTML/CSS, SQL, C
Frameworks/Developer Tools: React, Node.js, Firebase, Docker, Tailwind CSS, Git, Linux, Django, MongoDB
Interests: Music Enjoyer, Gym Lover, Tennis Player, Avid Electric Guitarist