Rohan Madan

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EDUCATION

University of California, San Diego San Diego, CA

Part time student enrolled in upper-division computer science courses. *December 2024 – June 2025*

MiraCosta College Oceanside, CA

A.S. in Computer Science & Math. Transferring to a 4-year university to pursue B.S. in CS. *Aug. 2023 – May 2025*

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

EXPERIENCE

Software Intern November 2024 – February 2025

Tech Mahindra *San Diego, CA*

- Developed a Python script that extracts test case data from Excel, generates analytical graphs, and compiles comprehensive Word reports, optimizing mobile device testing workflows
- Accelerated testing processes by 75%, eliminating manual data entry and enabling real-time analysis of throughput, upload/download speeds, and other key performance metrics, improving test precision and operational efficiency

Software Specialist August 2024 – November 2024

NASA NCAS *Remote*

- Led the software development for a team-based lunar exploration mission simulation, designing a secure interface and control system. Selected rover instruments, developed mission control, science analysis pipelines, and IT/cybersecurity measures
- Engaged in NASA-led workshops, webinars, and networking sessions with engineers, researchers, and experts, gaining valuable insights and mentorship from distinguished alumni

ECE Internship Program June 2024 – August 2024

University of California, San Diego *San Diego, CA*

- Engineered a functional electronic cane equipped with proximity sensors that trigger alerts based on object distance, utilizing CircuitPython, CAD modeling, and custom PCB design for real-world applications
- Acquired proficiency in Python and machine learning through hands-on projects and collaborative workshops with UCSD alumni, faculty, industry professionals, and peers, enhancing both technical expertise and professional skills

Vice President May 2024 – Present

MiraCosta College, Club IT *Oceanside, CA*

- Initiated and managed collaboration with guest speakers and led hands-on workshops on AI and cybersecurity, enhancing club events and boosting member participation by 60%
- Spearheaded the club's participation in the National Cyber League and SoCal Cyber Cup, achieving the club's highest placement in years (83/500+ in NCL and 139/4199 in SoCal) by implementing targeted training sessions focused on strengthing teamwork and hacking skills

PROJECTS

Poker Buy-In App January 2025 - Present

- Developing a full-stack poker buy-in app with Next.js and Firebase, allowing users to create games, set buy-ins, manage rebuys, and distribute winnings based on player chip counts, reducing manual distribution time and minimizing human error in calculating winnings
- Implementing Firebase Authentication for secure logins, integrating Stripe for payment processing, and utilizing Firestore for real-time data synchronization, while building a responsive, user-friendly interface with Tailwind CSS for a seamless cross-device gameplay experience

Stock Market Predictor Sept. 2024 - November 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, Tailwind CSS, Git, JUnit, Linux, OpenCV, OpenAI API
Interests: Music Enjoyer, Gym Lover, Tennis Player, Avid Electric Guitarist