REHATBIR SINGH

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EDUCATION

University of Wisconsin-Madison — Madison, WI, USA
BS Computer Science & Data Science (Dean's List) *GPA: 4.0 / 4.0* — Sep 2024 - May 2028

Mayoor Private School — Abu Dhabi, United Arab Emirates
Indian Central Board of Secondary Education Science Stream *GPA: 3.8 / 4.0* — Apr 2020 - Mar 2024

EXPERIENCE

Flux — Madison, WI
Co-founder & Lead Software Engineer — Feb 2025 - Present

- Founded a social networking app for student entrepreneurs, matching users by complementary skills
- Built and deployed the MVP with SwiftUI, Firebase, and Python, including real-time matching using AI recommendation engines
- Grew to 100+ active users at UW–Madison, validating product demand and driving early adoption

Al Masaood LLC — Abu Dhabi, United Arab Emirates
Software Developer Intern — May 2025 - Aug 2025

- Built and launched a React/SPFx timesheet tracker for 30+ technicians, saving 1,500+ sheets weekly through SAP-integrated SharePoint
- Assisted development of a legal chatbot using FastAPI, React, and RAG, saving the legal team 8 hrs/wk
- Partnered with the insurance department on an app for vehicle inventory and insurance, handling data modeling and SharePoint API integration

Data Science for Sustainable Development @ UW-Madison — Madison, WI, USA
Student Developer — Sep 2024 - Dec 2024

- Developed a statistics dashboard for Red-CORAL, an open-source crime visualization tool for organized crime in Central America with over 1,200+ data points using React and Firebase
- Integrated Node.js modules like Leaflet for geospatial visualization and Lucide for custom icons. Attended biweekly workshops on technical skills and professional development

PROJECTS

FreeVoIP *Swift, SwiftUI, Firebase, Python, Xcode Cloud* — rehatsingh.cv/freevoip
Deployed a decentralized peer-to-peer video calling app with secure contact sharing, eliminating the need for central servers. Built cross-platform with Rust and React (via Tauri) and leveraged the Iroh framework for real-time, peer-to-peer network transport.

Path Tracing Renderer *C, OpenGL, GLSL* — github.com/MysteryCoder456/path_tracer_c
Developed a path tracing renderer, inspired by the book Physically Based Rendering. Leveraged OpenGL for rendering pipelines and applied advanced math concepts like geometry, vector mathematics, calculus for accurate, physically based light ray simulations of real-world objects.

Blitz Board *Python, Flask, JavaScript, WebSockets, PostgreSQL, Redis* — blitz.codeboi.dev
A real-time multiplayer typing game with 300+ games played. Used Redis to synchronize game lobbies across multiple load-balanced Flask servers for seamless scalability. Self-hosted using Nginx and Docker containers.

SKILLS

Programming:	Python, Swift, JavaScript/TypeScript, C/C++, Rust, Java, Dart, Git (VCS)
Libraries:	Django, Flask, SQLAlchemy, SwiftUI, React, Next.js, Flutter, OpenGL, Godot
Technologies:	Docker, Nginx, PostgreSQL, MySQL, Linux
Others:	Agile Methodologies (Scrum), Jira, Stakeholder Communication, Sprint Planning

AWARDS

Honorable Mention in MadData Hackathon — dotData @ UW-Madison
Recognized for building & presenting Wavelength, an app that analyzes Spotify libraries to connect students with similar music tastes using data science techniques and social discovery algorithms. — Feb 2025

Dean's List — University of Wisconsin-Madison
Recognized on the Dean's List at the University of Wisconsin–Madison for achieving a 4.0 GPA, signifying academic excellence. — Fall 2024, Spring 2025