REHATBIR SINGH

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EDUCATION

University of Wisconsin-Madison   Madison, WI, USA
BS Computer Science and Data Science *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

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

- Built and deployed a React/SPFx timesheet tracker used by 30+ technicians to the company's SharePoint intranet, supporting SAP integration and the company-wide goal of going paperless.
- Partnered with the insurance department to develop an app to streamline vehicle inventory and insurance processes, involving data modeling, requirement analysis, integration with SharePoint APIs.
- Currently developing a RAG-based legal chatbot using FastAPI and React to assist with contract review; estimated to save the legal department 8 hours/week using retrieval-augmented review.

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

- Contributed to Red-CORAL, an open-source crime visualization tool for organized crime in Central America aligned with UN SDG 16, by developing a statistics dashboard 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.

The Godspeed Company   Abu Dhabi, United Arab Emirates
Co-founder, Lead Web Developer   Jun 2024 - Aug 2024

- Led a team of developers using React and Next.js to build a platform connecting teens with career opportunities, with a backend in Python/Django that matches users to roles based on a personality quiz.
- Web scraped 13,000+ LinkedIn profiles using Python and Selenium to analyze the target audience and support outreach efforts to raise awareness about our company.

PROJECTS

Flux *Swift, SwiftUI, Firebase, Python, Xcode Cloud*   https://linktr.ee/flux_app
Launched a mobile app MVP at UW–Madison to connect college entrepreneurs based on complementary skills and shared business interests, attracting 100+ users during the initial deployment period. Built with Flutter and Firebase, the app combines a Tinder-like swiping interface with LinkedIn-style networking features. Currently migrating to Swift to adopt Apple's new Liquid Glass design language.

Path Tracing Renderer *C, OpenGL, GLSL*   https://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*   https://blitz.codeboi.dev
A real-time multiplayer typing game with 300+ games played. Used Redis to manage game lobbies across load-balanced servers for scalability and session coordination. 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