

# REHATBIR SINGH

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## EDUCATION

### University of Wisconsin-Madison

BS Computer Sciences and Data Science *GPA: 4.0/4.0*

Madison, WI, USA

Sep 2024 - May 2028

### Mayoor Private School

Indian Central Board of Secondary Education Science Stream *GPA: 97.2/100*

Abu Dhabi, United Arab Emirates

Apr 2020 - Mar 2024

## EXPERIENCE

### Data Science for Sustainable Development @ UW-Madison

*Student Developer*

Madison, WI, USA

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.
- Learned to integrate Node.js modules like Leaflet for geospatial visualization and Lucide for custom icons, while attending biweekly workshops on technical skills and professional development.

### The Godspeed Company

*Co-founder, Lead Web Developer*

Abu Dhabi, United Arab Emirates

Jun 2024 - Aug 2024

- Organized and led a team of full-stack developers that used React and Next.js to build a website that connects teenagers with professional opportunities they're passionate about.
- Used Python and Django to create a backend service that takes responses from a personality quiz and suggests careers that the quiz taker may like.
- Scraped 13,000+ LinkedIn profiles using Python/Selenium to determine target audience and raise awareness about our company.

### Class Digital Leader

*Leadership Experience in High School*

Abu Dhabi, United Arab Emirates

May 2021 - Mar 2022

- Mentored 18 classmates on technology and IT, while presenting weekly reports on issues to IT staff.
- Recognized as "Best Digital Leader" for the 2021-2022 academic year for leadership in tech education.

## 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: Problem Solving, Communication, Teamwork, Making Great Coffee, Playing the Guitar

## PROJECTS

### Path Tracing Renderer C/C++, OpenGL

[https://github.com/MysteryCoder456/path\\_tracer\\_c](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 for accurate, physically-based light ray simulation. Demonstrated expertise in graphics programming by creating realistic rendering of 3D scenes using path tracing algorithms.

### Blitz Board Python, Flask, JavaScript, HTML5/Tailwind, WebSockets, PostgreSQL, Docker

<https://blitz.codeboi.dev>

A real-time multiplayer typing game nearly 300 total games played, inspired by my passion for typing. It brings competitive typists together for live typing tests, featuring performance tracking and leaderboards to foster a community of speed and accuracy enthusiasts.

### HeLP@MPS Flutter, Dart, Firebase, OAuth

<https://github.com/Ideal-Goggles/stem-2022>

A cross-platform app designed to combat food waste and unhealthy eating habits. Users post meal photos to receive ratings from the community, earning points and optionally competing within school groups. School staff can track and analyze food waste data for entire classes or grades using integrated tools.

## 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 during my first semester at the University of Wisconsin-Madison for achieving a 4.0 GPA, exceeding the minimum requirement of a 3.6 GPA.

Dec 2024