Simran Dhaliwal

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EDUCATION

University of Michigan **Ann Arbor, MI**
Bachelor of Science in Computer Science *Expected Graduation: May 2024*

EXPERIENCE

Wail of a Tale ***Lewis Center, OH***
Software Engineer Intern *June 2023 - Present*

- Led team of interns through transitioning company website to new hosting platform and implemented rolling updates with new user-friendly features
- Developed an interactive 3D visualization of company employees and information using WebGL and threejs
- Engineered a user-friendly chatbot with a dynamic question-response system and message forwarding for advanced and niche questions

University of Michigan Solar Car Team (UMSCT) ***Ann Arbor, MI***
Developer in Strategy Sub-Team *August 2022 - Present*

- Enhanced Telemetry subsystem performance by 15%, through proactive debugging, and optimization, leveraging SQL and Javascript, for accelerated statistics display and efficient aggregation of critical data from 8 distinct vehicle sensors.
- Collaborated with multiple teams to create and develop three cloud-based race simulators, incorporating advanced statistical modeling to accurately simulate diverse weather and road conditions, among other crucial factors.

PROJECTS

Portfolio (simrandhaliwal.dev) *April 2023 - May 2023*

- Engineered an immersive portfolio using React and CSS, blending visual appeal with seamless functionality
- Integrated social media links and a user-friendly contact form, enhancing user engagement and establishing a direct communication channel

Contagious Diseases Data Analysis *November 2022 - December 2022*

- Utilized 6 Machine Learning algorithms to analyze over 1000 unique data points with 12 factors to gain insight into spread and severity causes
- Enhanced clarity and impact of data interpretation through the generation of 15 distinct representations of the model's results for data analysis with the use of Python

Invasion Game *October 2022*

- Developed an engaging invasion game utilizing object-oriented programming in C++ while balancing functionality and immersive gameplay
- Constructed a tracking system to monitor and present up to 50 distinctive game and player statistics to enhance game depth and boost player engagement

Mechanical and Chemical Physics Simulators *January 2022 - April 2022*

- Developed 27 unique physics simulators in Vpython to accurately depict scientific phenomena ranging from micro-level molecular interactions to macro-level celestial collisions
- Created programs to compute complex variables involved in scientific simulations, applying theoretical concepts while accounting for real-world deviations

COURSEWORK

Mobile App Development, Artificial Intelligence, Data Structures and Algorithms, Database Management Systems

SKILLS

C++ & C, MySQL, SQL & Query Optimization, Python, VPython, R, React, CSS, HTML, Java, Javascript, Git, MongoDB