Shiham Chowdhury

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EDUCATION

University of Michigan — **August 2022 - May 2026**
Bachelor of Science in Electrical Engineering — *Ann Arbor, MI*

TECHNICAL SKILLS

- **Languages:** Java, Javascript, C++, Python, MATLAB
- **Developer Tools:** Visual Studio, Jupyter Notebook, LTSpice, React, Git
- **Hardware:** Soldering, Oscilloscope, PCB Design, Network Analyzer

PROJECTS

Word Occurrence Prediction Algorithm — Link to Project
- Built a C++ algorithm that processes and learns language to predict the natural occurrence of a word.
- Utilized machine learning algorithms to analyze and categorize words into pair types for improved prediction accuracy.
- Employed recursive binary search trees to efficiently parse and manage learned data, facilitating quick computations of log-probability scores.

Euchre Game — Link to Project
- Designed and implemented a fully functional Euchre game in C++ that supports up to 4 players.
- Integrated comprehensive game logic to enforce Euchre rules, handle gameplay flow, and ensure accurate game state management.
- Implemented strategic decision-making algorithms based on game state to simulate CPU opponents.

Image Resizer — Link to Project
- Created a C++ application that enables users to perform various image manipulations, including rotation, deletion of rows/columns, resizing, and more.
- Designed a Pixel class to encapsulate individual pixel properties and an Image class to manage the array of pixels, representing the entire image.
- Utilized pointers to efficiently locate and edit individual pixels based on user input, enhancing manipulation accuracy and performance.

Temperature-Controlled Fan — Link to Project
- Designed and built an Arduino-based device to control a fan's operation based on temperature readings and proximity detection.
- Utilized a DHT11 sensor to monitor temperature, with data displayed on a 16x2 LCD screen for real-time feedback.
- Implemented logic to activate DC motor-powered fan when temperature is high enough and deactivate when temperature is low or when ultrasonic sensor detects an object getting too close.

Personal Portfolio Website — Link to Project
- Built a website in React that includes an interactive navbar, email form and mobile-friendly view

WORK EXPERIENCE

Orlans Junior Associate — June 2022 - present
- Optimized data workflows within the company's information database to ensure efficient processing.
- Performed comprehensive quality checks to verify documentation complied to industry standards.
- Ensured timely completion of tasks and deliverables, maintaining workflow deadlines and efficiency.