Sajeev Debnath

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Education

University of Toronto — Toronto, ON
Bachelor of Applied Science, Computer Engineering (3rd Year) — *Sep. 2022 - June 2027*

Technical Skills

Back-end: C++ *(Proficient)*, C *(Proficient)*, Python *(Proficient)*, JavaScript *(Basic)*, Node.js *(Basic)*,
Front-end: HTML *(Intermediate)*, CSS *(Intermediate)*
Other tools: Git *(Proficient)*

Work Experience

Founder & Software Developer — May 2024 - August 2024
DisputeLens | GitHub | Website — *Toronto, ON*

- Programmed a tool in **Python** that creates timelines of agreements in multiple emails or threads
- Obtained email contents using the **Azure Identity library** giving access to all emails in the user's inbox
- Fed email contents into ChatGPT using **OpenAI API** to generate a timeline of agreements
- Designed the UI using **PyQT 5** enabling the user to interact with the back-end code
- Designing the company website in **HTML, CSS, JavaScript & Node JS** to efficiently convey our value proposition
- Wrote a business plan, calculating cash flow projections, and interviewed 32 homeowners to define and validate our business idea

Projects & Hackathons

NomNom | *C++, Git* | Slide Deck | Demo — January 2024 - April 2024

- Designed a map app in **C++** with the **OpenStreetMap API** for food delivery couriers to deliver efficiently
- Programmed the **A* algorithm** to find the shortest path between two street intersections
- Programmed the **multi-start** and **simulated annealing** algorithms, increasing path efficiency through multiple pick-up and drop-off intersections by **6%**
- Project was part of the Software Design and Communication course (ECE297) at the University of Toronto, receiving a **grade of A**

Graphify | *C, Git* | GitHub | Demo — March 2024 - April 2024

- Designed a graphing calculator **DE1-SoC FPGA** program in **C** to analyze linear, quadratic, and cubic graphs
- Wrote algorithms to find intersections, display intersections using character buffers, play background music, and take PS2 keyboard input.
- Project was part of the Computer Organisation course (ECE243) at the University of Toronto, receiving a score of **8.5 out of 10**

UTRA Hacks | *C++, Git, Arduino* | Devpost — January 2024

- Programmed the **Arduino microcontroller** in **C++** to enable the rover to track lines and avoid obstacles
- Developed software in a team using **Git** resulting in **74 commits**
- Achieved **1st place** out of 34 teams in the **autonomous vehicle hackathon**

Maze Game | *Verilog, FPGA* — December 2023

- Wrote a program in **HDL Verilog** on the **DE1-SoC FPGA** to create a maze game
- Developed software to enable PS2 keyboard input, background audio and timer functionality
- Project was part of the Digital Systems course (ECE241) at the University of Toronto, receiving a score of **85 out of 90**

Othello | *C* | GitHub | Demo — March 2023

- Designed a terminal application in **C** to play Othello against the computer.
- Programmed the computer to make strong moves using the **Greedy algorithm** by choosing a move that flips the most squares for the current move.