# Moksh Mehta

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## Education

**University of Toronto** Toronto, ON
*Bachelor of Engineering in Computer Engineering, Minor in Artificial Intelligence* *Sep. 2021 – May 2026*

## Technical Skills

**Languages**: OCPP 1.6 & OCPP 2.0.1, SQL, Python, C, C++, Java, JavaScript, HTML/CSS, Verilog, ARM Assembly, MATLAB
**Frameworks**: AWS, React, Node.js, Django, Heroku, JUnit, WordPress, Material-UI, FastAPI
**Developer Tools**: Git, Cursor AI, Zapier, Coda, TravisCI, Google Cloud Platform, VS Code, Visual Studio, PyCharm, IntelliJ, Eclipse
**Libraries**: pandas, NumPy, Matplotlib

## Job Experience

**Intern Hardware Integration Engineer** May 2024 – August 2025
*ChargeLab Inc.* *Etobicoke, ON*

- Led company wide projects from a technical perspective, ensuring documentation was up to date ensuring more than $500,000 in revenue
- Developed and proposed an end to end solution requested by our Tier 1 partners ensuring better customer experience and reducing support calls by 80%
- Developed automations that saved over 100 hours in manual work
- Conducted multiple company-wide training sessions, and one on one mentoring to the new interns ensuring a smooth onboarding
- Integrated with over 25 different EV charger manufacturers with around 40 charger models, ensuring a high quality of firmware design

**Software developer** October 2023 – Present
*University of Toronto* *Toronto, ON*

- Developed a REST API using FastAPI and PostgreSQL to store data from learning management systems
- Developed a full-stack web application using Flask, React, PostgreSQL and Docker to analyze GitHub data
- Explored ways to visualize GitHub collaboration in a classroom setting

## Projects

**Built the framework for a UNIX kernel** | *C, Git* September 2023 – December 2023

- Developed a C library that acted as a subreaper in addition to creating, monitoring and managing processes.
- Created a multi-level virtual memory management system by implementing two fork strategies- one that copies all page tables, and another that uses a copy-on-write optimization.
- Created an ext2 filesystem with directories, regular files and symbolic links that the Linux kernel could mount.
- Created a thread library similar to pthread for user-level cooperative threads by running threads in a FIFO queue.

**Geographic Information System – Project Manager** | *C++, OpenGL, Web APIs* January 2023 – April 2023

- Collaborated on a team project to develop a map software similar to Google Maps in C++, utilizing the OpenStreetMap database and APIs to draw geographical locations.
- Implemented algorithms such as Dijkstra's, A*, and 2-opt to facilitate pathfinding and obtain optimal directions
- Utilized GTK toolkit and EZGL graphics package to design GUI and allow the user to search, move, and zoom to a desired location on the map.

**Enhanced Processor** | *Verilog, Assembly, FPGA (DE1-SoC)* November 2022

- Developed an enhanced processor that performed read/write operations using memory and assembly language.
- Created a finite state machine that connected an Arithmetic Logic Unit, Bus Wires and an Instruction Register.

**Hardware Graphics Animation** | *Verilog, C, FPGA (DE1-SoC), ARM* November 2022

- Developed hardware animations on DE1-SoC's VGA output, programming and configuring FPGA using verilog.
- Used ARM processor on FPGA board to build game 2048 using C code.

## Relevant Coursework

- Software Communication and Design (C++,C)
- Computer Organization (ARM Assembly, C)
- Intro to Electronics, Circuit Analysis and Design
- Data Structures and Algorithms
- Probability and its Applications
- Digital Systems (Verilog)
- Computer Hardware (Embedded Systems)
- Operating Systems
- Control Systems, Robotics Modeling and Control
- Signals and Systems