# Jason Zhang

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## Education

**University of Toronto**                                                                                         Sep 2020 — Apr 2025

Bachelor of Applied Sciences in Computer Engineering – Dean's Honour List (**cGPA: 3.91)**          *Toronto, ON*

## Skills

**Languages**: C/C++, Python, JavaScript, HTML/CSS, ARM Assembly, Verilog
**Technologies**: PySpark, Seaborn, React, Tailwind, Node.js, Flask, Firebase, PostgreSQL, Git, VSCode

## Experiences

**Data Science and Engineering Intern**                                                            May 2022 — Aug 2022

HSBC                                                                                                                        *Toronto, ON*

- Engineered a framework for HSBC to investigate controversy from a sustainability perspective and streamlines the identification of overlapping data points between ESG pillars and controversy
- Developed a scoring methodology that outlines the transformations of pre-processed vendor controversy data to a controversy score for every company within the coverage universe
- Created visualizations using Matplotlib and Seaborn for a white paper documenting research and analysis
- Debugged data pipeline and a proprietary entity-resolution engine hosted on the Hadoop cluster

**Project Manager**                                                                                               Jan 2021 — Apr 2021

UofT ESP II                                                                                                               *Toronto, ON*

- Delivered a solution that improves communication between residential smart grid devices and the grid through optimizing the signal to noise ratio of the antenna component of e-Radio inc.'s P2D 2045™ Module
- Collaborated on professional engineering reports to liaise with client regarding the functionality of design
- Generated and maintained Gantt Charts to provide a timeline for deliverables throughout the design process resulting in improved work efficiency and team dynamics
- Engineered a solution analyzed to be less than **50%** of the original cost requirement in 4 months

## Projects

**Mappr** | Course Project | *C++, OpenStreetMap API, GTK, Git*
- Developed a Geographic Information System using the **OpenStreetMap API** and **GTK** toolkit
- Implemented **Dijkstra's** and **A\*** algorithms as well as multi-threading to optimize responsiveness of software when user queries for map directions using the GUI
- Ranked **above 50%** of other programs within the course in solving **TSP**

**NFTracker** | Demo | GitHub | *React, Node.js, JavaScript, Firebase*
- Integrated the **OpenSea API** in a web app that displays a gallery of NFTs and their prices added by the user for price tracking and bookkeeping purposes
- Implemented **Firestore Database** to store the NFTs added by the user and react concepts like custom hooks, reducers, and context to facilitate features like user authentication and requests to the database

**Zenmo** | Devpost | GitHub | *React, Node.js, JavaScript, Auth0, HTML/CSS, Bootstrap*
- Designed the frontend of a web app that allows users to set up "focus sessions" to promote productivity
- Implemented user authentication through **Auth0** to enable user-specific progress checking and secure routes within the app that required users to be logged in