KETAN VASUDEVA

Engineering Science Student

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⚙ github.com/natek1234

EDUCATION

Engineering Science - Robotics Major - BASc

University of Toronto

📅 September 2018 – Present

- Double Minor in **Business** and **Psychology**

EXPERIENCE

Full Stack Software Engineer

Manulife - Canadian Architecture

📅 May 2020 – August 2020   📍 Waterloo, Ontario

- Fully developed and deployed a web tool, through **Agile** methodology, to help **automate** security threat analysis reports for Security Architecture. **Increased productivity by 30%.**
- End-to-end development of tool using **React**, **Node.js/Express**, and **SQLite**.
- Researched and compiled a data set of Threats, Assets, and Controls relevant to Security Architecture to help automate reporting process.

Space Systems Team Member

University of Toronto Aerospace Team (UTAT)

📅 March 2019 – Present   📍 Toronto, Ontario

- Part of a team working towards deploying a satellite **by 2022** to measure **Anthropogenic CO_2** levels across the GTA through hyperspectral imaging.
- **Firmware:** creating the code base (in **C** and **C++**) for the satellite, including implementing features such as **SPI, UART, RS-485, CAN, I2C, SD Cards, SDRAM, and flash memory.** Extensive work with **HAL** libraries.
- **Payload-Electronics:** selecting and creating relevant hardware for the satellite. This includes MCU, optical sensor, and memory selection, as well as **PCB design** work through **Altium**.
- **Systems Engineering (SE):** working to streamline team processes and protocols. Successfully deployed **Confluence** team-wide to aid with team documentation.
- **Inclusion (Chair):** helped to create a space within UTAT to discuss and implement **Equity, Diversity, and Inclusion** goals both internally and in our broader engineering community.

Project Management Office Associate - Student

Tangerine

📅 April 2019 – August 2019   📍 Toronto, Ontario

- Helped **manage and organize** development projects.
- Aided in development and deployment of projects such as a **Chatbot**, a **Deep Learning** platform, and a new **line of credit**.

Assistant Director of STEM

Leaders of Today (Nonprofit)

📅 April 2019 – October 2019   📍 Toronto, Ontario

- Part of the founding **executive team** of the Leaders of Today nonprofit with the goal of empowering youth to make a change through their passions.
- In charge of the **STEM division**. Planning and executing events and workshops to educate and inspire youth in STEM fields, as well as advocate for climate action and social action through STEM.

TECHNICAL SKILLS

- **Web:** React, Node, Express, HTML, JS
- **Embedded Systems:** C, C++, ARM, Verilog, Arduino, Altium
- **Other:** Python, Java, SQLite, MySQL, Matlab

PERSONAL SKILLS

- **French** and **English** fluency
- Agile Methodology, PCB Design, Leadership, Communication, Flexibility, Composure

PERSONAL PROJECTS

Engineers Without Borders Canada (EWB) - Policy and Advocacy Team

- Met with Members of Parliament in order to advocate for the 2030 EWB's sustainable development goals.

NewHacks Hackathon

- Built an auto-regulation system for diabetic pump injections using **machine learning** techniques.

UTDL Designathon

- Designed, prototyped, built, and tested a pin-locked fully-integrated safety box to prevent home delivery package thefts using **Arduino**, **CAD**, and various **motors**.

University of Toronto Ultimate Team

- Represented the University at multiple regional and national tournaments.

ACHIEVEMENTS

- Governor General's Academic medal for **97%** high school graduating average
- **University of Toronto Scholar** and **AIA Canada Scholarship** recipient
- U of T Varsity Ultimate Team **Rookie of the Year**
- Received **Manulife Recognized Agilist** Certificate

INTERESTS

- R&D, Programming, AI, Quantum Computing
- Ultimate Frisbee, Tennis, Basketball, Soccer, Boxing, Gym
- Advocacy, Reading, Travelling