Marco Kaniecki

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Relevant Experience

Senior Year Project - Machine Learning for Real Estate Appraisal Sep 2022 - Apr 2023

- Developing program in team of four to use a combination of property images and related information for property valuation using **Python**
- Creating algorithms that will analyze property photos to identify specific features that impacts the price
- Actively in contact with supervisor for progress reports

XMX Emulator Apr 2022 - Aug 2022

- Emulated extension of original XM processor with twice as many registers in **C**
- Parts emulated include all CPU registers, 28 instructions, the program status word, addressing modes, encoded constants, 64KiB of byte-addressable primary memory, and CPU execution time
- Designed and implemented three new instructions for additional CPU register operations

Bitcoin Mining Simulator Apr 2022 - Aug 2022

- Created a multithreaded Bitcoin mining simulator in **C**
- Implemented thread synchronization through assigning different threads for different tasks
- Utilized priority-based scheduling along with aging to prevent task starvation
- Recieved a grade of A

Peter Gregson Design Challenge - Mine Sweeping Robot Apr 2022 - Aug 2022

- Designed and built (in a team of three) an autonomous robot tasked to disarm and dispose of mines, while avoiding contact with walls and simulated wildlife
- Placed top 10 out of 33 groups

Dalhousie Space Systems Lab June 2021 - June 2022

- Designed and built a CubeSat called LORIS (Low Orbit Reconnaissance Imagery Satellite); Funded $200,000 by Canadian Space Agency
- Active member of On-Board Computer (OBC)/Payload team of six people, assisting in the communication between processor and camera using **C/C++**

Automated Tea Steeper Jan 2021 - Apr 2021

- Designed and built (in a team of four) a device that lowers, steeps, and raises a tea bag automatically
- Programmed a microcontroller responsible for controlling various modules from a keypad matrix, speaker, to motion sensor, allowed a seamless tea making experience
- Evaluated overall performance and tweaked device for optimal use, efficiency, and user friendliness
- Documented work and presented a 40-page report on system architecture, detailed design, and performance; received a grade of A

Education

2020 - present	Bachelor of Electrical and Computer Engineering at **Dalhousie University** Computer Engineering Stream Expected to graduate in **May 2023**
2018 - 2020	Bachelor of Electrical and Computer Engineering years 1 and 2 at **Karlsruhe Institute of Technology** in Karlsruhe, Germany
2017 - 2018	Bachelor of Electrical and Computer Engineering year 1 at **Dalhousie University**

Technical Skills

Programming	Python, C/C++, Assembly, JavaScript, HTML, CSS
Documentation	LaTeX, Markdown
Version Control	Git
Design & Simulation	STM32CubeIDE, SolidWorks, iCircuit, LenLab, Intel Quartus Prime, ModelSim, LT-Spice
Other	MS Office, GitLab, GitHub

Non-Technical Skills

Communication	Actively maintain communication in team projects to stay on track and plan ahead
Adaptability	Grasp new things quickly and open to try different approaches to a problem
Bilingual	English (fluent), German (native speaker)

Interests

Technical	Tinker on Raspberry Pi, Machine Learning, Cybersecurity
Fun	Cycling, Badminton, Skiing