Isidor Kaplan

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Education

Bachelor of Applied Science, Computer Engineering | University of Toronto

- **2019 - 2023** Starting 3rd year in September 2021
- **4.0/4.0 cGPA** Cumulative Grade Point Average (4 terms).
- **96.3%** Cumulative Average

Professional Experience

Software Developer Intern | Rocscience Inc | **Summer 2021**

- Redesigned CPillar, a major C++ geological analysis software.
- Researched Unsupervised Machine Learning Image Segmentation for RocFall3.

Academic Researcher | iQua Research Group | **Summer 2020**

- Helped to design and apply deep reinforcement learning algorithms under the supervision of Prof. Baochun Li within the context of networking problems, such as congestion control, edge computing and network-adaptive coding.

Engineering Projects

See for Code and more Detail: https://github.com/isidorjkaplan

Processor Design Project | Project

- Designed a Verilog 16-bit, 8-register, interrupt-enabled processor.
- Designed assembly for processor
- Wrote assembly programs using memory-mapped I/O (VGA, buttons, LEDs)

Mapper Project | Term Project

- Implemented large-scale Google-maps inspired program in C++
- Designed user-friendly interface for interacting with complicated functionality
- Incorporated sophisticated solution for TSP using Simulated Annealing

Engineering Design Team | METSCO Energy Solutions

- Led an engineering team to implement a Machine-Learning based solution for identifying faulty power-line insulators from images.
- Collaborated with client to submit peer-reviewed research paper based on work

Galaxy Explorer AI | Course Project

- C++ AI to play an Atari-inspired game. Ranked 4th in class. Tuned with ML.

Reversi AI | Course Project

- Implemented an MCTS and Reinforcement Learning model in C to play the board game Reversi ranking within the top 5 out of 300+ students.

Profile

Computer Engineering student at the university of Toronto with interests in machine learning, software development, and computer hardware.

Technical Skills

Programming Languages

- C / C++
- Python
- Java
- MATLAB

Hardware

- ARM A9 Assembly
- Verilog

AI / ML

- Reinforcement Learning
- Computer Vision