Isidor Kaplan

isidor.kaplan@mail.utoronto.ca
linkedin.com/in/isidorjkaplan
github.com/isidorjkaplan
isidorkaplan.ca/transcript.pdf

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

Teaching Assistant (TA) | University of Toronto | **September - December 2021**
- *ECE244 (Programming Fundamentals)* in the coming academic term (Fall 2021)
- Introduce students to core programming concepts in such as Object Oriented Programming, Polymorphism, Data Structures, Computational Complexity, and the C++ Programming Language.

Software Developer Intern | Rocscience Inc | **Summer 2021**
- Reimplemented *CPillar*, a major C++ software for stability analysis.
- Surveyed state of the art Unsupervised Machine Learning Image Segmentation.

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**

CPillar | Work Project
- Rewrote CPillar from the ground-up in C++
- Incorporated best practices of Object Oriented Design and User Interface Design

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)

Project GitHub: **https://github.com/isidorjkaplan/ProcessorPublic**

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

Project GitHub: **https://github.com/isidorjkaplan/MapperPublic**

Publications

- **Hybrid Algorithm Based on Machine Learning and Deep Learning to Identify Ceramic Insulators and Detect Physical Damages**,
  Youssef El Haj, Ruth Milman, *Isidor Kaplan*, Ali Ashasi. CEIDP 2021 (*Accepted*)

Profile

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

Awards

Top Student Award (**2021**)

BFMI Sesquicentennial Trust Scholarship (**2021**)

Deans List (**2019-2021**)

In-Course Scholarship (**2020**)

First-Year Fellowship (**2020**)

ECE244 Contest Top 5 (**2020**)

APS105 Contest Top 5 (**2020**)

Technical Skills

Programming Languages
- C / C++
- Python
- Java
- MATLAB

Hardware
- ARM Assembly
- Verilog
- Quartus
- ModelSim
- FPGA

AI / ML
- Reinforcement Learning
- Computer Vision
- PyTorch
- OpenCV