

# Isidor Kaplan

## Education

**Bachelor of Applied Science**, Computer Engineering | University of Toronto

- **2019 - Present** Currently completing 2nd Year
- **4.0/4.0 cGPA** Cumulative Grade Point Average (3 terms)

## Professional Experience

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

- Incoming Software Developer Intern at Rocscience Inc

**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** | Final project - Computer Organization - Winter 2020

- Designed a Verilog 16-bit, 8-register, interrupt-enabled processor.

**Mapper Project** | Term Project - Software Communication & Design - Winter 2020

- Implemented large-scale Google-maps inspired program in C++

**Engineering Design Team** | Engineering Strategies and Practices II

- Led an engineering team to implement a Machine-Learning based solution for identifying faulty power-line insulators from images.

**Course AI Assignments** | Course Project - Fall 2020, Winter 2020

- Implemented in C++ an AI to play an Atari-inspired game called Galaxy-Explorer. Used Machine Learning (Python) to tune the hyper-parameters of a powerful heuristic which was able to score 4th in the class.

**Reversi AI** | Course Project - Winter 2020

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

**Minecraft Plugins** | Personal Project - 2019

- Java 300+ class, 27,000+ lines of code Minecraft Plugin.

## Relevant Courses

- **Computer Fundamentals:** Introduction to C programming
- **Programming Fundamentals:** C++, Data Structures, Complexity
- **Digital Systems:** Digital Circuit Design. Lab focused. FPGA's and Verilog.
- **Computer Organization:** ARM A9 Assembly, Processor Design
- **Software Communication & Design:** Team Design Project - Google Maps.
- **Engineering Strategies and Practices I and II:** Engineering design process. Worked with a client in industry to solve a real-world problem.
- **Calculus I, II, III, Linear Algebra, Complex Analysis:** Math Courses

## Contact

☎ 416-917-9227

✉ [isidor.kaplan@mail.utoronto.ca](mailto:isidor.kaplan@mail.utoronto.ca)

🌐 <https://www.linkedin.com/in/isidorjkaplan>

🔗 <https://github.com/isidorjkaplan>

🔗 <https://isidorkaplan.ca/transcript.pdf>

🏠 170 Robert St. Toronto ON M5S2K3

## Technical Skills

- C, C++, Python, Java
- ARM A9 Assembly
- Machine Learning
- Reinforcement Learning
- PyTorch
- Verilog
- Git
- MATLAB
- Linux Command Line

## Awards

**Deans List** (2019-Present)

- All academic terms to date

**Galaxy Explorer AI** (Fall 2020)

- Top 5, course competition

**First Year Fellowship** (2020)

- Awarded prestigious fellowship to sponsor first year research during the summer.

**In-Course Scholarship** (2020)

- Was awarded a prestigious in-course scholarship for academic performance during 2019-20 school year.

**Reversi AI** (Winter 2020)

- Top 5, course competition

**Board Proficiency** (2019)

- Top grades in high school

**Waterloo Competitions**

Certificate of Distinction

- Canadian Computing Competition (2018,19)
- Euclid Math (2019)