

# Isidor Kaplan

[isidor.kaplan@utoronto.ca](mailto:isidor.kaplan@utoronto.ca) | [linkedin.com/in/isidorjkaplan](https://www.linkedin.com/in/isidorjkaplan) | [github.com/isidorjkaplan](https://github.com/isidorjkaplan) | [transcript.pdf](#)

## EDUCATION

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**B.A.Sc Computer Engineering | University Of Toronto** Sept. 2019 – May 2024  
*4.0/4.0 Cumulative GPA | 96.1% Cumulative Average | #1 Top Student Award (Twice)* Toronto, ON

## EXPERIENCE

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**Software Engineering Intern** May 2023 – August 2023  
*Hudson River Trading* New York, NY

- Starting May 2023: Write highly optimized low-latency programs

**Computer Architect Intern** May 2022 – May 2023  
*Intel* Toronto, ON

- Design Intel high-performance FPGAs next-generation routing architecture
- Simulate and evaluate hypothetical FPGA architectures on large design suites
- Analyze large quantities of empirical data for meaningful trends and insights
- Develop internal simulation frameworks in C++ and data-analysis tools in Python

**Teaching Assistant** Sept 2021 – April 2023  
*University Of Toronto* Toronto, ON

- Computer Organization*: ARM v7 Assembly, CPU Design in Verilog, Bare-Metal Programming
- Software Communication & Design*: Graph Algorithms, Competitive Design Project, C++ STL
- Programming Fundamentals*: C++, Object-Oriented-Programming, Data Structures, Complexity Analysis

**Software Developer Intern** May 2021 – August 2021  
*Rocscience* Remote

- Redesigned legacy commercial C++ stability analysis software enabling first major update in years
- Applied unsupervised machine learning to automated feature extraction from geological images

**Machine Learning Academic Researcher** May 2020 – August 2020  
*University Of Toronto – iQua Research Group* Remote

- Design and apply deep reinforcement learning algorithms under the supervision of Prof. Baochun Li to congestion control, edge computing and network-adaptive coding.

## AWARDS

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Edward S. Rogers Sr. Dept of Electrical and Computer Engineering <i>Top Student Award</i>	2020-21 and 2021-22
Charles Edwin Trim <i>Scholarship</i>	Sept 2021 – April 2022
BFMI Sesquicentennial Trust <i>Scholarship</i>	Sept 2020 – April 2021
First-Year <i>Fellowship</i>	May 2020 – August 2020
In-Course <i>Scholarship</i>	Sept 2019 – April 2020

## TECHNICAL SKILLS

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**Languages**: C/C++, Python, Java, Rust, MATLAB, System-Verilog, ARM v7 Assembly  
**Focus Areas**: High Frequency Trading, Computer Architecture, Software Engineering, FPGA, Machine Learning  
**Math Courses**: Multivariable Calculus, Probability, Linear Algebra, Control Theory, Complex Analysis & ODEs  
**Hardware Courses**: Computer Architecture, Computer Organization, Digital Electronics, Digital Systems  
**Software Courses**: Algorithms & Data Structures, Operating Systems, Machine Learning, Programming Courses

## PUBLICATIONS

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**Ivory: Learning Network Adaptive Streaming Codes** IEEE IWQoS 2022  
*Salma Emara, Fei Wang, Isidor Kaplan, Baochun Li*

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