

# Igor Chovpan

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## EXPERIENCE

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### Firmware Developer

May 2025 – Present

*University of Toronto Aerospace Team*

*Toronto, ON*

- Contributing to the FINCH satellite firmware, reviewing pull requests, presenting findings in a team.
- Leading the migration of Zephyr development environments for 10+ team members to Docker, supporting Linux, Mac, and Windows platforms.
- Achieved 2x speedup of an image compression algorithm by applying general performance optimizations.
- Researching ways to improve image compression performance using multithreading and SIMD.

### Junior C++ Developer

July 2022 – July 2023

*Keepit; a backup solution for cloud services*

*Krakow, Poland*

- Launched Azure Devops backup coverage working with 3 teammates over the course of 12 months.
- Collaborated with QA and Customer Support teams, provided technical documentation, presented projects to stakeholders.
- Developed an item upload scheduling algorithm, enabling restore of snapshots with up to 10 million dependencies.
- Refactored parts of C++20 development and Java 8 testing code, unified JSON parsing approach.

## TECHNICAL SKILLS

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**Languages:** C++, Go, Python, Java

**Other:** Git, GDB, CMake, Linux, Zephyr RTOS

## EDUCATION

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### University of Toronto

Graduating in June 2027

*Computer Science Major, Mathematics Major, Coop student*

*GPA: 3.71*

#### Relevant coursework:

- CSC265 – Enriched Data Structures and Analysis (91%)
- CSC258 – Computer Organization (86%)
- CSC311 – Introduction to Machine Learning (79%)
- MAT237 – Advanced Calculus (86%)
- STA257 – Probability and Statistics I (93%)

Supporting the Ukrainian community outside of class.

## PROJECTS

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### rm-exporter

- Found limitations of note export on the reMarkable tablet (inability to select folders and export large notes).
- Developed an open-source GUI export client from scratch using Go, Typescript, Svelte.
- Addressed community feedback by fixing issues and adding functionality, achieved 200 downloads and 30 stars on the Github repository.

### food-classifier

- Researched various machine learning models to classify a food item based on survey answers.
- Implemented final prediction script in Python in a team of 4 people across 2 months.
- Wrote a report in a team describing hyperparameter tuning and choosing a final model.
- Achieved 86% testing accuracy on the instructor's data, team rank 5 out of 65.

### game-of-life

- Wrote a robust implementation for Conway's Game of Life mathematical simulation in Rust, Javascript, WebAssembly, ensuring memory safety and multiplatform support.
- Optimized time usage by using Hashlife high-performance algorithm and running it on a separate thread, allowing to render millions of state updates per second.
- Shared technical details by writing an explanation blog and implementing integration tests.