

# Igor Chovpan

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## EXPERIENCE

### Junior Software Developer (C++)

July 2022 – July 2023

*Keepit; a backup solution for cloud services*

*Krakow, Poland*

- Launched and improved *Azure Devops* backup coverage working with 3 teammates over the course of 12 months;
- Developed a file upload scheduling algorithm handling up to  $10^7$  file dependencies;
- Optimized the *API* usage up to 99% in extreme cases by preventing the redownload of *Work Items*;
- Participated in refactoring the *C++* development & *Java* testing approach for 4 months, unifying *JSON* parsing.

## TECHNICAL SKILLS

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

**Other:** Linux, REST API, PlantUML, bash, LaTeX

## EDUCATION

### University of Toronto

Expected May 2027

*Bachelor of Science, Computer Science Major, Mathematics Major*

*Toronto, Canada*

**Upcoming coursework:** CSC373 – Algorithm Design, CSC207 – Software Design.

Received a *Co-Curricular Record* for participating in a Recognized Study Group, improving group's grasp of Calculus.  
Supporting the Ukrainian community outside of class, organizing financial support for war victims.

## ACHIEVEMENTS

**uoftctf 2024:** rank #80 out of 1225 teams participating in the University 'Capture The Flag' tournament;

**IOI 2020:** participated in qualifications between the national and international level;

**Ukrainian Olympiad in Informatics 2021:** top 1.5% of all participants, rank #28 nationally, won a bronze medal.

## PROJECTS

**raytracing-bench** | *Python, Java, Numpy, Cuda, Computer graphics*

Aug 2024 – Present

- Implemented and measured 3D sphere renderers in *Java, Python, Numpy, Cuda* using path tracing algorithm;
- Achieved 7x – 993x speedup compared to 3 other implementations by migrating to the *CUDA* architecture.

**shorturl** | *Golang, PostgreSQL, REST API, JavaScript, Linux*

Jun 2024 – Present

- Launched a website for sharing short URLs by implementing backend in *Golang*;
- Prevented possible *XSS attacks* by using *html/template* library supporting *HTML escaping*;
- Published the app on the *Google Cloud Compute Engine* platform by creating a *Linux systemd* service.

**game-of-life** | *C++20, WebAssembly, JavaScript, Github Actions*

Mar 2024 – Present

- Launched a *Conway's Game of Life* browser client, rendering up to  $2^{27}$  generations per second;
- Exponentially optimized time usage by implementing *Hashlife* algorithm in *C++* and *WebAssembly*;
- Further shared technical details by writing an explanation blog and implementing integration tests.

**man-sample** | *Latex*

2019 – 2021

- Improved research writing process under the Junior Academy of Sciences of Ukraine by developing a paper template over the course of 3 months.