

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 *REST 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, Java, Python, 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, CSC311 – Introduction to Machine Learning.

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: top 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 | *Java, Python, Object-Oriented Programming, Computer graphics*

Aug 2024 – Present

- Measured performance of 3D sphere renderers in *Java*, *Python*, *Numpy* by implementing a path tracing algorithm;
- Achieved 7x – 993x speedup compared to 3 other implementations by migrating to the *CUDA* architecture.

shorturl | *Golang, JavaScript, Databases, Web development, User Interface Design*

Jun 2024 – Present

- Launched a website for sharing short URLs handling up to 1200 *API* requests per second;
- 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, JavaScript, Algorithms and Data Structures, Operating Systems*

Mar 2024 – Present

- Implemented a *Conway's Game of Life* browser client, rendering up to 2^{27} generations per second;
- Optimized time usage exponentially by implementing *Hashlife* algorithm in *C++* and *WebAssembly*;
- 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.