Igor Chovpan

437-665-0196 | i.chovpan@mail.utoronto.ca | linkedin.com/in/chopikus | github.com/chopikus | chopikus.dev

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;
- Optimized the *API* usage up to 99% in extreme cases by preventing the redownload of *Work Items*;
- Developed an algorithm handling the order of restore item dependencies supporting up to 10^7 elements;
- Participated in refactoring the *C++* development & *Java* testing approach for 4 months, unifying *JSON* parsing.

TECHNICAL SKILLS

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

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

EDUCATION

University of Toronto — Expected May 2027
Bachelor of Science, Computer Science Major, Mathematics Major — *Toronto, Canada*

Relevant coursework: CSC148H – **Introduction to Computer Science**, MAT157 – **Analysis I**.

Upcoming coursework:

- CSC373H – **Algorithm Design, Analysis & Complexity**;
- CSC258H – **Computer Organization**.

Recieved a *Co-Curricular Record* for participating in a Recognized Study Group, improving group's grasp of Calculus. Supporting Ukrainian community outside of class, organizing finanical 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, Cupy* using path tracing algorithm;
- Achieved 7x – 993x speedup compared to 3 other implementations by migrating to the *CUDA* arhitecture.

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.