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;
- Developed a file restore 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++, Rust, Javascript, Java, Python

Other: Linux, REST API, bash, LaTeX

EDUCATION

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

Upcoming coursework: CSC373 – **Algorithm Design**, CSC258 – **Computer Organization**.

Participating in a Computer Science Student Union mentor program, providing advice to first-year students.
Supporting the Ukrainian community outside of class.

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

game-of-life | *C++, Rust, JavaScript, Algorithms and Data Structures, Multithreading*
- Made a web client for a *Game of Life* mathematical simulation, rendering up to millions of 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.
- (**In progress**) Migrating the implementation to *Rust*, supporting usage of different threads, improving readability.

raytracing-bench | *Java, Python, Object-Oriented Programming, Computer graphics*
- Measured performance of 3D sphere renderers in *Java*, *Python*, *Numpy* by implementing a path tracing algorithm;
- Achieved 7x – 993x speedup compared to the other implementations by migrating to the *CUDA* architecture;
- Contributed to the *TornadoVM* computation project by reporting an issue and writing an installation guide for a specific platform.

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