

ROMAN SAVELYEV

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🐙 github.com/romca585

Technical Skills

Languages: Python, Java, C, C++, Basic, ADA, Fortran, JavaScript, Twig

Technologies: HTML, CSS, PHP, NVIDIA Warp, MPI, OpenMP, Git, Symfony, Doctrine, MariaDB/MySQL, Linux, Visual Studio

Work Experiences

Volunteer Web Developer

July 2024 – Present

Slitherine Software

Remotely from Kitchener, Ontario

- Developed a custom web application using Symfony to enable administrative users to monitor the status of multiple servers for Slitherine Software
- Simplified server management by adding the ability to manage multiple server status pages in one interface, using customizable widgets for easier tracking
- Implemented widget creation and modification through the SonataAdminBundle, improving the readability and usability of the status pages based on the user requirements
- Removed the need for consistent server monitoring through the use of Doctrine to map and store widget history in a SQL database based on user preferences
- Further added more custom options and features based on employer needs to ensure a more robust application
- *Languages/Technologies used: HTML, Twig, JavaScript, CSS, PHP, Symfony, Doctrine, MariaDB/MySQL, Linux, Visual Studio*

Research Assistant

May 2022 – Aug 2022

Wilfrid Laurier University

Waterloo, Ontario

- Contributed to the algorithm development of the record breaking accelerated computation of billions of digits for the constant Zeta(3)
- Utilized the resources of Compute Canada clusters, including Graham, Beluga, and Narval, to execute calculations
- Acquired proficiency in a pre-existing codebase through analysis and editing as needed in order to fit the newer requirements
- Implemented MPI to significantly reduce the completion time
- Optimized the GMP and MPFR libraries by rewriting specific components, enabling the calculation of 64-bit limb sizes as opposed to 32-bit, which resulted in a significant increase in the size of the final results
- Engaged in communication with the developers of the GMP library to gain insights and guidance on modifications that would enable the use of 64-bit limbs
- *Languages/Technologies used: Python, C, C++, MPI, Linux, Visual Studio*

Projects

Nvidia Warp Research

Jan 2023 – April 2023

Research Assistant

Guelph, Ontario

- Conducted research to improve the parallelism capabilities of Nvidia Warp's CPU parallelisation mode by exploring methods for achieving multi-thread parallelism, which is currently limited to single thread usage
- Worked with the OpenMP shared memory API to resolve this issue
- The research was aimed to replicate the performance success already achieved in Nvidia Warp's GPU parallelization mode
- Successfully designed and integrated multi-threaded parallelization functionality into Nvidia Warp's CPU mode using OpenMP - allowing those without an Nvidia GPU to use Nvidia Warp as closely as possible to how it was intended to be
- *Languages/Technologies used: Python, C, OpenMP, Linux, Visual Studio*

Extracurricular Experiences

GryphHacks' Vice President of Internal Affairs

Aug 2021 – May 2022

University of Guelph

Guelph, Ontario

- Maintained accurate records of meeting hours, discussed topics for all project teams, and ensured effective communication with the university, sponsors, and key figures to drive progress and success
- Acted as Vice President in the absence of other Vice Presidents, managing contracts for GryphHacks events and ensuring continuity of meetings and activities, including the successful coordination and execution of the main event

Event Advisor for Laurier Computing Society

Sep 2022 – Sep 2023

Wilfrid Laurier University

Waterloo, Ontario

- Managed the planning and execution of engaging events, collaborated with the executive team for seamless delivery, and facilitated proceedings by moderating discussions and fostering active audience engagement
- Conducted post-event evaluations, analyzed survey feedback, and implemented improvements to enhance attendee satisfaction, increasing event attendance and engagement

Education

University of Guelph

2019 – 2024

Bachelor of Computing (Computer Science Major / Sociology Minor)

Guelph, Ontario

- 80.7% Cumulative GPA