First Last

website.url
gh-username

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Skills

- **Languages**: Python, C/C++, Java, Scala, Kotlin, JavaScript, TypeScript, Haskell
- **Tools/Frameworks**: Django, Flask, Make, GDB, Valgrind, Docker, Nginx, Git, Node.JS, Express, React, Vue
- **Platforms**: Windows, Linux, Google Cloud Platform

Education

- **University of Waterloo** Waterloo, ON
  Candidate For Honours Bachelor of Computer Science; CGPA: 95.10% *Sep 2021 – Present*
  - **Coursework**: Object Oriented Programming (Adv) (100%), Foundations of Sequential Programs (Adv) (99%), Data Structures (Adv) (93%), Statistics (Adv) (94%), Combinatorics (Adv) (98%)
  - **Scholarships**: $8,000 Faculty of Mathematics scholarship, $2,000 President's Scholarship of Distinction

Experience

- **Huawei – Data Center Network Engineering Intern** Waterloo, ON
  Engineering software for high-throughput, low-latency data transfer in file storage networks (C, DPDK) *May 2023 – Present*
  - Creating a UDP socket library on top of DPDK, with potential for 18x speed improvement over Linux kernel sockets
  - Developing a transport protocol to ensure reliable data delivery over UDP while maintaining performance
- **AMD – Software Engineering Intern** Remote
  Developed and maintained debugging tool for 200+ KMD developers across AMD (C++, Python) *May 2022 – Aug 2022*
  - Added feature to inspect hardware scheduled queues, enabling debugging of critical launch-gating issues
  - Proposed and implemented improvements used across unit (GTest, GMock) and CI test infrastructure, reducing development time and increasing accuracy.
  - Implemented overhaul of extension UI library, creating consistency in the output format and removing the need for manual formatting
- **WePlate – Backend Engineer** Remote
  Designed, developed, and deployed (Python & Django) backend system for nutritional insights *Jan 2022 – June 2022*
  - Created a Simulated Annealing algorithm to generate optimized portion sizes
  - Processed and served mass amounts of cafeteria scheduling and nutritional data (10,000+ items)
  - Deployed and updated scalable Django webservice using GCP AppEngine and CloudSQL

Awards/Competitions

- **ICPC ECNA Regionals**: Represented Waterloo at the 2021 and 2022 contests, placing 4th and 6th against 90+ other university teams
- **Putnam 2021**: Placed in the top 500 of the most famous University-level mathematics competitions
- **Google Code Jam 2021**: 3rd of Canadian contestants (165th overall) in third round of major algorithms competition with 90,000+ participants
- **CCC & CCO 2021**: Placed 1st out of 2,900+ participants at Canada's most prestigious high school programming contest (CCC), qualifying for the CCO (top ∼40 CCC) and achieving a silver medal

Projects

- **C++ Game Engine**: Designed and implemented object-oriented (OOP) game engine built around the MVC pattern. The engine supports handling a variety of entities with built in entity movement, collision detection, and a graphics library
- **Competitive Programming Tools**: A suite of tools that greatly speed up implementation and debugging during programming contests. Includes automated local testing, stress testing tools, and browser intrgration. Available as a Python CLI tool or a VSCode extension with a convenient UI (TypeScript and React.JS)
- **LACS Compiler**: Scala program that compiles a simple functional programming language for the MIPS architecture. Includes support for closures, nested functions, static typing, automatic garbage collection, and tail-call optimization
- **Minecraft Server Plugins**: Created plugins using Java, Kotlin, and the Spigot API which add new commands and features, such as KitPVP mechanics and UI, custom bosses, and hats.