Moses Xu

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plasmatic1

Skills

- **Languages**: Python, C/C++, HTML/CSS/JS, Node.JS & TS, Java, Kotlin
- **Tools/Frameworks**: Django, Git, Flask, Express, Docker, Nginx
- **Platforms**: Windows, Linux, GCP

Education

- **University of Waterloo** — Waterloo, ON
  Candidate For Honours Bachelor of Computer Science; Major Average: 97.8% — *Sep 2021 – Present*
  - **Coursework**: Linear Algebra I (Adv) (95%), Calculus II (Adv) (97%), Elementary Algorithm Design and Data Abstraction (Adv) (100%)
  - **Scholarships**: $8,000 Faculty of Mathematics scholarship, $2,000 President's Scholarship of Distinction

Experience

- **AMD: Software Engineering Intern** — Remote
  Worked on debugging tool for 200+ KMD developers across the development cycle (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
  - Implemented overhaul of UI library
- **Programming Contest Organizer & Author** — Remote
  Organized contests, created algorithms problems and prepared tests and graders — *Sep 2019 – Present*
  - **Codeforces LATOKEN Round 1**: Algorithms contest with 18,000+ participants sponsored by LATOKEN. Contest preparation done with C++
  - **DMOJ Contests**: Organized contests with hundreds of participants
- **WePlate – Backend Engineer** — Remote
  Designed, developed, and deployed (Python, Django) backend system for nutritional insights — *Jan 2022 – June 2022*
  - Created an algorithm using Simulated Annealing to generate optimized portion sizes
  - Processed and served mass amounts of cafeteria scheduling and nutritional data (10,000+ items)
  - Managed deployment of service using Google Cloud

Awards/Competitions

- **ICPC ECNA Regionals 2021**: Placed 4th at the 2021 ECNA contest as part of top team Waterloo Black
- **Google Code Jam 2021**
  - Major algorithms competition with 90,000+ participants
  - Placed 3rd of Canadian participants in Round 3 (165th overall)
- **2021 Canadian Computing Olympiad**: Silver medalist, the CCO is an invite-only (top ∼40 CCC participants in 2021) team selection test for the Canadian IOI team
- **2021 Canadian Computing Competition**: Placed 1st out of 2,900+ participants at Canada's most prestigious high school programming contest

Projects

- **Competitive Programming Tools**
  Python module for Competitive Programming
  - Tools that greatly speed up implementation and debugging during programming contests, including automated local testing, stress testing tools, and browser intrgration
  - Also available as a VSCode extension with a convenient UI (TS, React)
- **Personal Webserver**
  Web services managed with Docker and Nginx
  - **Rating Badges**: Dynamic SVG badges displaying user rating (TS, Express)
  - **DMOJ solution searcher**: Searchable solution database of 1,400+ problems using Django