

ROGER FU

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in kiritofeng

🔗 kiritofeng

EXPERIENCE

Advanced Micro Devices

Display Solutions Software Developer

📅 May 2020 - Aug 2020

- Directly contributed to the AMD kernel-space display drivers for both Windows and Apple Boot Camp
- Fixed several release-blocking WHQL certification failures
- Reduced DPMS latency by up to 100ms on tiled display configurations
- Contributed to the development of an AMD partner's currently-unreleased VR headset
- Worked with various display technologies, including tiled displays, multi-stream transport, display stream compression, HDR, and Freesync
- **Technologies used:** C, C++, Git, WinDbg, Windows Hardware Lab Kit

DMOJ: Modern Online Judge

Software Developer and Administrator

📅 2016 - Present

- Contributed to the DMOJ (dmoj.ca), an open-source platform for running programming contests
- Hosted over 200 programming contests for various organizations, including three national olympiads
- Ported 90k line codebase from Python 2 to Python 3
- Designed a responsive Django frontend using modern web technologies
- Maintained a whitelist of Linux syscalls to sandbox over 60 languages
- Oversaw moderation team responsible for end-user interaction
- **Technologies used:** Python, Django, HTML/Jinja2, CSS/Sass, Java, C, C++, Git, Linux, Docker

PROJECTS

More projects can be found on my Github profile.

jpendulum

🔗 github.com/kiritofeng/jpendulum

- Computer vision program written in Java for tracking motion of a swinging pendulum in a video by performing fuzzy matching on extracted frames
- **Technologies used:** Java, Maven, FFmpeg, OpenCV

PanMK

🔗 github.com/kiritofeng/panmk

- Python program to continually compile files via Pandoc, inspired by LatexMK
- Tracks files and automatically calls Pandoc and launches/reloads viewer
- Cross platform: tested on Windows and Linux
- **Technologies used:** Python

ACHIEVEMENTS



Canadian Computing Olympiad 2017/2018 Medalist

Top 30 Canadian high school students, invited to week-long training camp for national team selection



Canadian Math Olympiad 2018 Qualifier

Top 70 Canadian high school students, invited to write the Canadian Math Olympiad



American Invitational Mathematics Examination Qualifier (x4)

Top 5% of American and Canadian high school students on the American Mathematics Contest for four years, invited to participate in the American Invitation Mathematics Examination



ECOO 2018 Second Place Finalist

Second place out of 400 teams in Ontario-wide programming competition



University of Waterloo Mathematics National Scholarship

One of fifteen recipients of the University of Waterloo's Mathematics National Scholarship, valued between \$12-25k, awarded for outstanding high school contest performance

QUALIFICATIONS

C C++ Java Python Django

GNU Make Javascript SQL HTML/Jinja2

CSS/Sass Bash Batch

Git Linux \LaTeX Docker WinDbg

EDUCATION

Candidate for Honours Bachelors of Mathematics

University of Waterloo

📅 2019 - 2024 (Projected)

Computer Science and Combinatorics & Optimization, Term Dean's List