

## EXPERIENCE

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### Valve Corporation (independent contractor)

May 2023 – Present

Built system software to improve gaming on Linux.

- Wrote conformant OpenGL 4.6, OpenCL 3.0, and Vulkan 1.4 drivers for the Apple GPU.
- Designed, integrated, and tested a NIR-based shader compiler.
- Maintained NIR, the common shader compiler infrastructure within Mesa3D.
- Optimized dynamic recompilation to ensure smooth gameplay under emulation.
- Investigated software issues and communicated findings in monthly reports.
- Authored technical blog posts to publicize the status of these software projects.
- Contributed to the specifications of graphics standards including Vulkan.
- Led team of developers building the open graphics stack for Apple hardware.

### Collabora

Jun 2019 – Apr 2023

Developed open source graphics drivers for Arm Mali GPUs.

- Designed and implemented conformant OpenGL ES 3.1 driver "Panfrost".
- Developed shader compilers for Midgard, Bifrost, and Valhall architectures.
- Documented the Mesa3D-based driver stack.
- Worked with diverse clients in the graphics domain.

### Free Software Foundation

Jun 2018 – Aug 2018

Interned with technical team to advance software freedom.

- Implemented remote server management system.
- Reverse-engineered REST API to enable accessible PayPal donations.

## EDUCATION

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### University of Toronto

Sep 2019 – Jun 2023

*Honours Bachelor of Science*

*Toronto, ON*

Computer Science major, Mathematics and Religion minors. Graduated with High Distinction.

## PROJECTS

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**Asahi Linux** | Reverse-engineering the Apple GPU.

Dec 2021 - Present

**Panfrost** | Reverse-engineering Arm GPUs.

Jul 2017 - May 2019

## BOARD MEMBERSHIPS

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**Asahi Linux**

Feb 2025 - Present

**X.Org Foundation**

Apr 2022 - Apr 2024

## AWARDS

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**Award for Outstanding New Free Software Contributor**

2020

**Google Open Source Peer Bonus**

2020

**Lester B. Pearson International Scholar**

2019

**National Merit Finalist**

2019

## LANGUAGES

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**English:** C2 (IELTS) – native

**French:** B2 (TEF)

**Spanish**