

# Alyssa Anne Rosenzweig

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## SUMMARY

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Versatile graphics developer with seven years experience in drivers and compilers. I kickstarted Panfrost, the open Arm GPU effort, leading early development and reverse-engineering. I then spearheaded open graphics on Apple M1, shipping conformant drivers capable of running AAA games. No matter the challenge, I am committed to pushing forward graphics.

## EXPERIENCE

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### Intel

Aug 2025 – Present

Designed open source graphics drivers for Intel GPUs.

- Designed and developed OpenGL and Vulkan drivers to improve gaming on Linux.
- Researched techniques to build a state-of-the-art shader compiler.
- Debugged, tested and maintained Intel's open source graphics drivers.
- Analyzed 3D workloads to identify bottlenecks and improve performance.
- Contributed to the specifications of graphics standards.

### Valve (independent contractor / self-employed)

May 2023 – Aug 2025

Built system software to improve gaming on Linux.

- Led team of developers building the open graphics stack for Apple hardware.
- 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 FEX's 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.

### Collabora

Jun 2019 – Apr 2023

Developed open source graphics drivers for Arm Mali GPUs in partnership with Arm.

- Designed and implemented conformant OpenGL ES 3.1 driver.
- Developed shader compilers for Midgard, Bifrost and Valhall architectures.
- Documented the Mesa3D-based driver stack.
- Worked with diverse clients requiring open Mali drivers for their products.

## 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.

Lester B. Pearson International Scholar.

## PROJECTS

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**Asahi Linux** | Reverse-engineered open graphics drivers for Apple Silicon.

Dec 2021 - Aug 2025

**Panfrost** | Early open source Mali driver based on grassroots reverse-engineering.

Jul 2017 - May 2019

## BOARD MEMBERSHIPS

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**Asahi Linux**

Feb 2025 - Present

**X.Org Foundation**

Apr 2022 - Apr 2024

## LANGUAGES

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**English** (native). **French** (advanced). **Spanish**.