Moshi Turner

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Industry Experience

Software Engineer, 3D Deep Learning

May 2023-

Arcturus Industries

• Doing contract work for Valve Software and Bigscreen VR on next-generation hardware & computer vision products.

Associate Software Engineer

May 2021-April 2023

Collabora

- Wrote Monado's optical hand tracking, learning computer vision fundamentals, machine learning, artificial dataset generation, real dataset collection, statistics and C++ from scratch over a very short timespan.
- Helped write Monado's SLAM infrastructure.
- Wrote and improved many hardware drivers.
- Contributed to OpenComposite, libsurvive, StereoKit and many other FOSS projects along the way.
- Mentored a Google Summer of Code student.
- Wrote blog posts and Twitter posts promoting Monado and Monado's hand tracking.
- Regarded as "the demo god" (their words not mine) for constantly producing live and recorded demost hat showed off various pieces of Monado, including our SLAM and hand tracking.

FOSS Hacker March 2020-May 2021

Project North Star

- Wrote most of Monado's North Star driver, on top of some minimal initial work from Nova King.
- Wrote Monado's "ultraleap v2" driver from scratch.
- Helped get StereoKit working on Linux.
- Built many hardware prototypes, iterating on a custom Project North Star headset about 40 times.
- Wrote several display calibration methods for the North Star headset's displays.
- Did some initial work building+evaluating various open-source SLAM implementations.

Education

AAS in Mathematics

May 2018-Dec 2021

Austin Community College

- 3.7 GPA
- Started at age 15, graduated at age 17.

Skills/Values

• High skill in C/C++ and Python. Intermediate in Rust, C# and web development, and I can pattern-match most other programming languages.

- Strong background in calculus, linear algebra, statistics, machine learning, data science, and low-latency machine vision.
- Pretty good at searching for, reading and understanding ML and pose estimation papers.
- Intermediate proficiency in Mandarin. Basic proficiency in Hindi, Portuguese, German, French, Spanish.
- Hard worker and quick learner
- Systems thinker; obsessed with going up and down levels of abstraction.
- More than a decade (since I was 9!) of experience using Blender and its Python API for 3D art, and about three years of using it for ML synthetic data generation.
- A decade of Linux experience. The first time I installed Linux was when I was 11, and the first time I built the Linux kernel myself was when I was maybe 12-13.
- I care about results! I want to ship products that help make peoples' lives better. Nothing's above or below me in achieving that end.

Conference Presentations

"Introducing Monado's Hand Tracking," FOSS XR, speaker and organizer. Minneapolis, MN., October 2022.

References

Mateo De Mayo, Associate Software Engineer Collabora, TUM mateo.demayo@collabora.com

J Corvinus*, Senior Designer ex-Holos, VRChat dude.dudeness@gmail.com

Jakob Bornecrantz, Senior Software Engineer VMWare, Collabora, NVIDIA jakob@collabora.com

Rylie Pavlik, Principal Software Engineer Sensics, Collabora rylie@collabora.com

Daniel Willmott, Software Engineer Monado GSOC '22, LucidVR, Valve Corporation danw@valvesoftware.com Nick Klingensmith*, FOSS Hacker Zynga, Breach & Clear, Microsoft, Qualcomm programmerpichu@gmail.com

Malek Hodroj*, Software Engineering Intern Microsoft, Noblis malekh@stanford.edu

Nova King*, FOSS Hacker Holos, Stardust technobaboo@gmail.com

Michael Istvan, Professor of Philosophy Austin Community College michael.istvan@gmail.com

Frederic Plourde, Business Strategy Lead Collabora frederic.plourde@collabora.com

^{*} I have only worked informally on FOSS projects with this person.