Jackie Yi

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WORK EXPERIENCE

Engineering Lead @ mecka.ai
February 2025 - August 2025

– Joined a 6 person startup building egocentric humanoid robotics datasets from human POV videos
– Led custom stereo camera project for robotics data collection from prototype to launch, manufacturing over **100** units, collecting **5000** hours of data, and bolstering **$8M seed round**
– Developed containerized API + web GUI for live monitoring, control, and cloud uploads, used by hundreds of operators
– Implemented performance-critical features (automatic exposure algorithm, storage reliability benchmarking tool, CUDA-accelerated RAW→RGB pipeline)
– Scaled tech operations in critical data collection periods, peaking at five 24/7 locations with 5-7 recorders each, generating over **600 hours** of footage daily

Systems Engineer Intern @ Evercloak
May 2024 - September 2024

– Operated and maintained core wind tunnel system for nanofilm mebrane testing
– Performed end-to-end construction and testing of **7** nanofilm cartridges, documenting and presenting results, ensuring the team determines the most optimal nanofilm material for production
– Designed and built **10+** different apparatuses and fixtures, using CAD, 3D printeing, laser cutting and machining
– Worked closely with PhD researchers to streamline experimental procedures, cutting experiment execution time by **30m (17%)**

Engineering Co-op Intern @ Miltera Machining Corp
September 2023 - December 2023

– Designed and 3D printed **28+** custom fixtures for CNC machining and CMM inspection.
– Helped automate storage and tooling inventory, saving operators **10 minutes** of searching per bit and reducing inventory tracking overhead
– Wrote 200+ pages of documentation to standardize procedures and streamline intern onboarding

Unity3D Developer Intern @ EXO Insights
January 2023 - April 2023

– Developed Unity features for VR digital twins, including biometric tracking, traffic simulation, and visualization tools
– Used Blender to model, texture and rig over **20** low-poly models for use in VR apps
– Improved intern onboarding process and documentation, reducing new intern ramp-up by **40%**

PROJECTS

Analog Audio Mixer 2024   Link to Project Docs

Designed 4×2 analog audio mixer PCB in KiCAD, with op-amp based volume/mix circuits; fabricated and soldered board as proof-of-concept demo

Viktor Robotic Arm 2025   Link to Project Docs

Built 4-DOF robotic cosplay arm powered by servo motors on a Raspberry Pi Zero; developed glove controller with bend sensors to map finger motion to arm joints

SKILLS

Software	C# C++ C JavaScript Python SQL Linux NextJS React Native Docker AWS Go
Hardware	CAD 3D Printing Laser Cutting KiCAD MasterCAM AutoCAD
Media	Figma Premiere Pro Photoshop Lightroom After Effects OBS/VMix

EDUCATION

2021 - 2027   B.A.Sc., Mechatronics Engineering at **University of Waterloo**   (GPA: 3.8/4.0)