Mathias Petersen

Game-Tech Adjacent Tools | Runtime Systems | Dataflow Graphs | Internal Tooling | Performance-Sensitive Systems

GAME TECH / TOOLS / RUNTIME SYSTEMS
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FOCUS

Technical founder and robotics systems builder focused on real-time pipelines, developer tools, runtime coordination, simulation/control-adjacent systems, and performance-sensitive software. Strong fit for tools, engine-adjacent, gameplay-systems support, automation, or platform roles.

Runtime systems	Media pipeline	Device platform	Shipped product
typed graph engine + node runtime	capture, processing, graph execution	OS, drivers, hardware layer, UI	real users, support, feedback

TARGET STACK

Languages
Rust, C++, Java, Python, TypeScript/JavaScript

Tools / Runtime
Dataflow graphs, runtime planning, plugin registries, CLI/operator tools, observability, IPC/HTTP concepts

Performance
Low-latency vision pipelines, zero-copy media, CPU/GPU execution paths, deterministic planning

Frontend / UX
Svelte, React, Tauri, dashboards, configuration editors, technical documentation

RELEVANT EXPERIENCE

Founder & Lead Engineer | Prometheus Dynamics LLP — Mar 2023 - Present
- Founded and lead a robotics hardware/software company building affordable high-performance vision and control systems for FRC teams and education.
- Designed and shipped HVS-Raze/Helios across PCB/CAD, embedded Linux, Rust backend services, Svelte UI, camera integration, assembly, testing, manufacturing coordination, and customer support.
- Led a 50-unit initial production run through multiple prototype revisions; sold approximately 25 total units and supported/sponsored FRC teams during the season.

Tech Mentor & Former Software Lead | FRC 6390 — Oct 2018 - Present
- Mentor students across programming, electrical, mechanical, soldering, troubleshooting, controls, and match-season debugging.
- As student lead, built reusable Java control layers and autonomous tooling that helped reduce robot software bring-up from weeks to days.

Robotics Instructor & Tech Lead | Zebra Robotics / FVCA — Jul 2023 - Jun 2024
- Taught robotics and programming to grades 1-12; deployed classroom systems including digital signage, cloud storage, CanvasLMS/K3S, and internal management tooling.

SELECTED PROJECT EVIDENCE + LINKS

Daedalus
Typed dataflow graph runtime for deterministic planning, CPU/GPU execution paths, plugin nodes, telemetry, and FFI/SDK boundaries.

Find: github.com/Prometheus-Dynamics/Daedalus

Styx
Sync-first zero-copy Rust media pipeline stack for capture, decode, transform, graph integration, recording, and service workflows.

Find: github.com/Prometheus-Dynamics/Styx

Eidos
Rust CV/image-processing workspace for ArUco, calibration, contours, detectors, filters, geometry, frames, masks, and temporal processing.

Find: private: Prometheus-Dynamics/Eidos; demo available

Orion
Distributed node runtime with client SDK, operator CLI, control/data-plane split, transports, observability, auth, and audit surfaces.

Find: github.com/Prometheus-Dynamics/Orion

HeliOS
Custom embedded Linux OS/image stack for Prometheus camera hardware, CM5 deployment, backend services, UI assets, and CV runtime.

Find: github.com/Prometheus-Dynamics/HeliOS

Lemnos
Hardware discovery, driver matching, and runtime interaction layer across GPIO, PWM, I2C, SPI, UART, USB, and Linux backends.

Find: github.com/Prometheus-Dynamics/Lemnos

FRC-Athena
Reusable Java FRC robotics framework: control layers, vendor integration, examples, docs, and faster robot software bring-up.

Find: github.com/FRC-6390/FRC-Athena

HVS-Raze / Helios
Shipped CM5 robotics vision camera: custom PCB/CAD, Rust backend, Svelte UI, camera driver work, assembly, and support.

Find: prometheus-dynamics.ca/products/helios-vision-system-raze

ADDITIONAL EXPERIENCE

Byte Camp | Lead Instructor — Jul 2022 - Apr 2023

Taught Blender, Godot, Scratch, programming fundamentals, 3D/game projects, and youth technical camps.

McDonald's | Crew Trainer — Aug 2021 - Nov 2022

Trained new staff, handled fast-paced service operations, safety/sanitation, and practical team communication.

EDUCATION & CREDENTIALS

Simon Fraser University
BASc, Mechatronic Systems Engineering
Started Spring 2025 - Expected 2029/2030
Co-op eligible

CompTIA Security+
SY0-701
Active Jul 2024 - Jul 2027

BrainStation
Cybersecurity Diploma
Completed Jul 2024

North Surrey Secondary
Honours Graduate
Completed Jun 2023