

Péter József Lódrí

Senior Rust Systems & Real-Time Edge GPU Engineer (Autoware Autonomous Driving OS) — Deterministic sub-millisecond Rust & C pipelines for real-time spatial perception at the edge.

Live Interactive Showcase: <https://tier4.vaked.dev> · LinkedIn: <https://www.linkedin.com/in/peter-lodri/>

01. SELECTED SYSTEMS & INTERACTIVE WORKS FOR TIER IV (ティアフォー · Autoware)

Osiris (simplifaisoul/osiris) [OSS Architect · Real-Time 3D Spatial Telemetry] —

<https://github.com/simplifaisoul/osiris>

Core Architect on Osiris — real-time 3D geospatial and multi-sensor intelligence dashboard built for high-frequency streaming telemetry.

pureQTern & project-zero [C / Rust · Zero-Allocation Deterministic Codec] — <https://github.com/peterlodri-sec>
Memory-safe Rust and zero-dependency C inference runtime for 1.58-bit ternary models, eliminating heap jitter on constrained edge compute.

8b-is / MLX-QUANT [Edge GPU Quantization · 12.80× Memory Reduction] — <https://github.com/8b-is>
Low-bit ternary quantization and custom GPU kernels designed to fit high-parameter perception and planning models onto embedded automotive GPUs.

lissajoverse & enthea [Real-Time Signal Processing · 60fps WebGL2] — <https://oscilloscope.vaked.dev>
Sub-millisecond phase/frequency signal processing and deterministic 60fps shader pipelines.

Kernel & Embedded Security Tooling [Linux Kernel Internals · Embedded Android/C] —

<https://github.com/peterlodri-sec>

Production Linux kernel internals (kptr_restrict research, eBPF telemetry) and low-level C/Android instrumentation from Inpedio & Cygnet.

Osaurus & Headroom (PR #1418) [OSS Architect · Local Autonomous Harness] —

<https://github.com/osaurus-ai/osaurus>

Core Architect on Osaurus (offline autonomous agent execution with cryptographic identity) and contributor to Headroom kompress routing.

02. ALIGNMENT WITH YOUR ENGINEERING ROADMAP / 志望動機

TIER IV's leadership of The Autoware Foundation proves that open-source, verifiable, safety-critical engineering is the only scalable path to autonomous mobility. In autonomous vehicles, heap jitter, memory bandwidth stalls, and opaque black-box pipelines cost lives. My career bridges low-level Linux kernel/C internals, memory-safe Rust, real-time 3D telemetry visualization (Osiris), and 12.80× compressed edge GPU inference (pureQTern / MLX-QUANT) — the exact toolkit needed to make Autoware faster, leaner, and provably deterministic.

TIER IVが主導するオープンソース自動運転OS「Autoware」は、安全性と透明性が求められる自動運転社会のグローバルスタンダードです。組み込みLinuxカーネルやC/Rustの低レイヤー実装、リアルタイム3D空間テレメトリ基盤（Osiris）、そして車載エッジGPUのメモリ帯域制約を打破する1.58ビット量子化技術（pureQTern / MLX-QUANT）を融合させ、品川のTIER IVチームでAutowareのRust化とリアルタイム知覚パイプラインの進化に貢献したいと強く志望しています。

03. DIRECT LINKS & LINKEDIN CONTACTS

• Shinpei Kato (加藤真平) (Founder & CEO / CTO, TIER IV & Founder of The Autoware Foundation):
<https://www.linkedin.com/search/results/people/?keywords=Shinpei%20Kato%20TIER%20IV> — Founder of TIER IV and Autoware, leading open-source autonomous driving OS architecture.

• Kazuya Takeda (竹田一哉) (Co-Founder & Chief Scientist, TIER IV):
<https://www.linkedin.com/search/results/people/?keywords=Kazuya%20Takeda%20TIER%20IV> — Co-founder leading

human-centric autonomous mobility and sensor signal processing.

- TIER IV Global Engineering Talent Acquisition (Technical Recruiting · Shinagawa, Tokyo): <https://www.linkedin.com/search/results/people/?keywords=TIER%20IV%20Recruiter%20OR%20Talent%20Acquisition%20Tokyo> — Global English-speaking engineering recruitment team in Shinagawa.