Jason Plumb

Principal Software Engineer | Systems Analytics | Workflow Intelligence | Developer Productivity
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Technical leader with 25+ years building observability platforms, telemetry pipelines, SDKs, analysis tooling, and workflow intelligence for complex software systems. Deep background translating large-scale runtime and engineering signals into actionable diagnostics, productivity improvements, and software-quality insights across graphics, compute, computer vision, and developer platform teams. Known for identifying the questions worth asking, partnering across engineering and leadership organizations, and delivering systems that improve decision-making. Recent focus on AI-assisted engineering, orchestration-driven workflows, and human-in-the-loop systems for developer productivity and software quality.

Core Strengths

Systems analytics and intelligence	Developer workflow intelligence	Software quality and observability
Data-driven diagnostics & investigations	Cross-functional technical leadership	Stakeholder influence and prioritization
Distributed and concurrent systems	AI-assisted engineering workflows	Complex runtime and platform systems

Professional Experience

Intel Corporation 1999 - 2025

Software Architect, Intel® Graphics Performance Analyzers (Intel® GPA)

- Architected a data-driven instrumentation pipeline from LLVM front-end definitions to generated API-callback backend code for Direct3D 12 and Vulkan analysis, improving the scalability and consistency of platform diagnostics.
- Built ETW-driven and API-trace-driven analysis layers that fused telemetry from multiple sources into actionable diagnostics for GPU developers, extending a long-running line of performance-analysis work later reflected in U.S. Patent 8,826,234.
- Developed visualization and investigation workflows that converted complex traces into usable analysis views, shortening debug cycles and surfacing systemic quality and productivity issues earlier.
- Worked across driver, research, and game developer consultant groups to identify high-value analysis problems, prioritize capabilities, and productize them into reliable developer-facing tools.
- Translated low-level platform behavior into clear recommendations, helping engineers and stakeholders make faster decisions about performance, correctness, and platform investments.

Software Architect, Intel® RealSense™ Technology

- Designed depth camera firmware and SDK components used across robotics, access control, industrial automation, and healthcare scenarios.
- Delivered cross-platform SDK capabilities consumed by internal teams and external partners, improving integration quality and accelerating adoption.
- Partnered with external collaborators on face and object scanning workflows, with related invention work contributing to issued patents in camera-driven interfaces, AR/VR, and geometry processing.

Software Architect, Intel® OpenCL™ SDK

- Developed GPU processing models for shared-local-memory architectures and designed a lock-free work-dealing and work-stealing tasking system for heterogeneous compute workloads.
- Contributed to platform capabilities recognized internally for pioneering Intel OpenCL support on constrained and low-power platforms.

Selected Highlights for Systems Analytics & Intelligence Roles

- Turns complex runtime, telemetry, and workflow data into diagnostics, decision support, and engineering action.
- Bridges low-level systems knowledge with executive-friendly narratives.
- Experienced building tools that improve developer productivity and software quality in large, cross-functional engineering environments.
- Actively applying AI-assisted and orchestration-driven workflows to software delivery, diagnostics, and human-in-the-loop engineering systems.

Patents

1. Relational Modeling for Performance Analysis of Multi-Core Processors (US 8,826,234). Multicore execution model for tracing performance relationships and exposing bottlenecks in complex systems.
2. Augmented Reality System (US 7,301,547). Camera-based AR framework for blending virtual elements with real-world interaction.
3. Portable Virtual Reality (US 7,113,618). Portable VR architecture for immersive 3D interaction.
4. Shading of Images Using Texture (US 7,245,305). Texture-based shading technique for more efficient 3D rendering.
5. Camera Driven Virtual Workspace Management (US 6,927,757). Camera-driven interface method for managing virtual workspace interactions.
6. Determining a Bounding Shape for a Collection of Points (US 6,771,841). Efficient method for deriving bounding geometry from point clouds.

Earlier Roles at Intel

Software Architect, GPA Task Analyzer | Developed a real-time ETW trace-capture system and thread-scheduling analysis methods for multi-core performance diagnostics, work later reflected in U.S. Patent 8,826,234 on relational modeling for performance analysis. Built timeline-based observability for complex runtime behavior, helping teams move from reactive debugging toward more proactive system analysis.

Software Architect, Larrabee SDK | Co-designed pre-silicon emulators, firmware, tasking systems, and SDK components for Intel's experimental many-core GPU architecture. Helped deliver the first release of the Larrabee SDK and contributed developer-facing tooling for a forward-looking graphics and compute platform.

Technical Consultant, VTune and Intel Threading Tools | Helped partners including Adobe, Industrial Light & Magic, Sony, Autodesk, and id Software analyze and optimize runtime performance, supporting adoption of Intel threading and performance tools. Created and executed the Threading Immersion Program, a deep ISV enablement effort supporting Intel's multi-core transition and helping teams convert complex performance data into practical engineering actions.

Software Architect, Macromedia Director / Shockwave 3D Player | Designed and built a browser-native interactive 3D rendering engine, with invention work in texture-based shading and geometry processing later captured in U.S. Patents 7,245,305 and 6,771,841. Co-authored the ECMA-363 Universal 3D File Format standard, contributed technology later integrated into Adobe PDF, and helped establish processor-scalable 3D playback on the web.

Standards and Recognition

- Co-author, ECMA-363 Universal 3D File Format standard; speaker, Game Developers Conference (GDC) 2006: Exploiting Scalable Multi-Core Performance in Large Systems.
- Frequent speaker at Intel technical events on threading, performance analysis, and developer tools.
- Repeated Intel honors and recognition across Intel Threading Tools, Larrabee SDK, Intel GPA, OpenCL, and RealSense.

Training and Education

- AI Everywhere - Intensive Deep Learning with Applications | Intel Corporation | Nov 2024
- The Complete Neural Networks Bootcamp: Theory and Applications | Udemy | Oct 2024
- Certified Scrum Product Owner | Scrum Alliance | Aug 2013
- Bachelor of Science, Computer Science and Engineering | Santa Clara University

Representative Partners

Adobe | Industrial Light & Magic | Sony | Autodesk | id Software | 3D Systems