Kyle Kukshtel

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PROFESSIONAL EXPERIENCE

Unity, *Engineering Manager, VM (CoreCLR, Mono, & IL2CPP)* Nov 2025 - Present

- Lead and manage a team of world-class engineers to drive the Mono to CoreCLR transition in the Unity game engine.
  - Helped steer a cross-org effort to ship a foundational change to Unity's runtime platform without breaking existing users (100M+ MAU platform) and internal developers.
  - Coordinated across hundreds of engineers and managers to ensure all bugs were fixed and test suites were passing.
  - Shipped the key deliverables on time and relatively bug free, with very positive user sentiment.
  - Working to harmonize core Unity runtime work with the idea of agent-as-user, driving frontier experiments that redefine what it means to use Unity.
- Agentic Expert/Advisor — ran multiple Claude Code onboarding sessions for the whole org with hundreds of attendees, including senior technical and VP leadership. Helped define the SKILL/AGENTS.md strategy for our core monorepo.
- Successfully onboarded team of largely AI skeptic senior/principle engineers into effective, regular AI users
- Lead and architect a modern delivery pipeline to bring IL2CPP changes into Unity trunk repo.

Senior .NET Runtime Engineer October 2024 - November 2025

- Worked on all aspects of the .NET runtime underpinning the Unity game engine
  - Bug fix and feature work on to the old runtime (Mono) for LTS Unity versions.
- Work on IL2CPP — Unity's proprietary technology that translates CIL to C++.
  - Major feature work included adding support for compiler intrinsics
- Continually working up and down the stack, from user-domain C# code to verifying and decompiling executables to examining assembly (SSE, Neon, AVX, etc.)
  - Direct experience with decompiling and debugging tools like RADDebugger, ILSpy, etc.
- Support user projects for elevated service customers, opening up and inspecting large projects to find bugs.
- Deep experience on advanced C# topics like PInvoke, icalls, Span<T>, stackalloc, etc.

Possibility Space, *Lead Systems Engineer* December 2023 - April 2024

- Worked on cancelled **cooperative, UGC-focused multiplayer AAA roleplaying game** built in Unity with a distributed team of 80 people.
  - Helped architect and implement sandbox gameplay systems designed for user-generated content
  - Worked to identify, prototype, and develop pipeline and tooling efficiencies across all studio disciplines
  - Built out custom in-game windowing system leveraging UI Toolkit to rapidly implement new game features.
  - Worked with custom scripting language to bind to custom implementation of UI Toolkit
  - Unity, Rider, Perforce/Swarm/Helix, FMOD, JIRA, TeamCity

Afterschool Studio, *Co-Founder, Lead Developer & Creative Director* January 2017 - Present

- **Shipped Cantata** *(Unity, PC)*, a tactical strategy game published by Modern Wolf
  - Led a 12 person team across all aspects of programming, art, design, production, and audio.
  - Architected and implemented gameplay logic and systems for a large scale strategy title
    - Command pattern + queue architecture with async execution (UniTask).
  - Programmed all UI with Unity's UI system — static panes, transitions, procedural layouts, skins, etc.
  - AI programming with via custom async Utility-AI implementation.
  - Built data pipeline to allow data editing independent of engine.
  - Built a robust runtime editor to allow for prototypes and scenario authoring with custom serialization.
  - Built in-game feedback tool and backend to allow players to submit bugs with screenshots directly to bug tracker.
  - Built custom tilemap renderer to allow for rendering 10,000+ tiles with bespoke data and art per tile
  - Unity, VS Code, Rider, Git, Plastic, FMOD, Aseprite, Playfab, Pipedream, Airtable, Linear, Jetbrains Space

Scatter, *Co-Founder & Integration Engineer & Technical Product Manager,* March 2016 - November 2019

- **Shipped Emmy Winning Zero Days VR** (Oculus VR, Sundance debut) + **Blackout VR (**TIFF debut)
- Served as technical product leader of Scatter's volumetric capture tool, "Depthkit"
  - Built out bespoke technical pipelines in Unity that allowed users to sequence and add effects to linear video media reprojected as a 3D asset.
  - Defined product vision for new Depthkit integrations and workflows and worked with partner studios to put them into production
  - Ran R&D efforts and rapidly built out technical prototypes for new Depthkit features and integrations in Unity, Three.JS, Twitch, and Unreal.
  - Collected and analyzed customer feedback to drive technical iteration and development decision making.
- Supported multiple immersive film productions made with Depthkit as a Volumetric Capture Supervisor.
- Built Node.JS server backend for Depthkit's software infrastructure that leveraged Stripe, Firebase, TaxJar, Segment, Google Analytics, BigQuery, Tableau/PowerBI.
- Lead, hosted, and organized the Volumetric Filmmakers NYC Meetup group (~500 members)

SELECTED PUBLISHED GAME DEVELOPMENT TOOLS

Zinc, *Custom 2D Game Framework,* 2021 - Present

- ECS-driven 2D game engine designed for rapid prototyping.
- Backend in Sokol + STB (C) with P/Invoke code to bind to C#. Working with .NET native memory APIs like *unsafe*, *fixed*, *Span<T>, NativeMemory,* etc
- **Zinc.Bootstrapper** — Library that cross-compiles Sokol, DearIMGUI, STB, Cute with Zig for easy cross-platform development.
- **Zinc.ECSGenerator** — C# Incremental source generator that turns attribute-tagged classes into ECS entities.
  - Big project built with Claude Projects functionality

Depot, *Static game data editor,* 2021 - Present

- Electrobun app that runs a server locally or in the cloud. Built in MCP server and CLI. Fully built with Claude Code.
- Custom data rendering with KDL-type dialect, reference tracking, search, export options, Webhooks.
- Originally built (by hand) as open source tool in VSCode with a frontend in Svelte/JS. ~20K downloads
- **Depot.SourceGenerator** — Custom source generator that turns Depot files into typesafe static C# data.

mood.site, *Image reference collecting tool,* 2024 - Present

- Fullstack development - Svelte app with Supabase and Stripe backend that allows for easy image board creation and sharing. Extensive use of Claude Code to build this.

Selected other tools:

switchyard**,** State Machine Editor that serializes states to JSON for custom engine interop, Typescript*,* 2026

kittyhtml, Render agent html output as inline images in the terminal, Rust, 2025

loregrid**,** Experimental Narrative Tool backed by LLM Typescript*,* 2024

Various Open Source Contributions and Writing, 2019 - Present

- Open source contributions to *Facepunch.Steamworks, ClangSharpPInvokeGenerator, Mono runtime*
- Various popular blog posts:
  - Harness Engineering for Game Development
  - On-Demand Software
  - *Game Design Mimetics*
  - Vibecoding the mood.site Premium Update

EDUCATION

Georgia Institute of Technology, B.S. Computational Media, December 2012

TECHNICAL FOCUS

- Expert C# programmer with strong knowledge of the .NET ecosystem.
- Expert user of agentic tooling like Claude Code, with extensive writing on using it in a game development context.
- Expert knowledge of game architecture techniques and strategies for achieving performance, observability, and iteration speed.
- Deeply experienced in rapid prototyping and comfortable using a variety of tools to get the job done.
- Expert Unity developer with experience in UI, Input, Timeline, Mechanim, 2D, ShaderGraph, and custom tooling
  - Deep experience with FMOD plugin and developing additional tooling to support integration
- Custom Game Engine development experience (Sokol, STB, DearIMGUI, Cute) and C# interop with PInvoke.
- Experience working with compilers, garbage collectors, VMs
- Deep experience in Fullstack Javascript & Typescript (Svelte, Supabase, Bun, Deno, Node)
- Direct experience building SaaS with Stripe, Figma, Firebase, Supabase, Cloudflare Pages & Functions
- Familiar with Git, Plastic, and Perforce (Helix), Linear, JIRA.