

# **David (Dave) Stevens**

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## **PRINCIPAL SOFTWARE ENGINEERING LEADER**

Strategic, results-driven architect offering expertise in understanding business challenges, end-user needs, the space and tech available, then implementing a well-honed approach to tackle the biggest challenges head-on, having leveraged client applications, VR / AR, service back ends, content / data pipelines, and business intelligence. Trusted organizer, innovative business partner, effective communicator, and problem-solving project manager known for building strong partnerships to implement agile methods to create / implement / improve software solutions and foster communication between tech and art / design teams, and backend / storefront teams. Collaborative leader and resourceful team contributor with demonstrated success in directing and empowering diverse, cross-functional large and small teams, implementing best practices to improve performance and security, and delivering quality software solutions that drive the attainment of company initiatives.

## **CORE COMPETENCIES**

Project Leadership / Tasking / Resource Management | Requirements Assessments | Troubleshooting | Quality Assurance | Risk Identification / Mitigation | Compliance | Process Improvements | Project / Program Management | Operational Strategy | Influential Decision Making | Client / Partner / Stakeholder Engagement

## **TECHNICAL PROFICIENCIES**

Agile / Process-Based Approaches | Object Oriented Design / Architecture | C++ | C# | Java | Python | Lua | TypeScript | Data Pipelines - Business Intelligence / Asset Management | Developing Client Apps For Mobile, Desktop, Console, Hololens, Vr | Develop Back Ends To Support Apps - Azure Services - Batch, Azure Storage, CDNs | Unity 3D – Editor, Code Plugins, Performance Measurement | Networking - Client-Server / Peer-Peer Relationship | Memory /Cpu Troubleshooting | Defensive Engineering | Familiarity With Game Development Mechanics - Player Input, Character Behavior, Ui, Vehicles, Fps Systems, General Game Logic | Analytics | Metrics | Legal / Regulatory Guidelines | AI usage for coding assistance | Microsoft Office and Google Office Apps

## **EXPERIENCE**

### **Jahnel Group, Lehi, UT**

**May 2025 – Present**

#### **Principal Software Engineer**

Working as an engineer for Zenimax/Bethesda Game Studios as a team supplement from Jahnel Group. Helping to build the set of APIs used for supporting mods, social experiences, authentication across many systems, and other services that bring value to gamers playing Bethesda Game Studios or id games such as Starfield, Skyrim, or Doom.

- Using Claude 4.0 agent based development tools through GitHub Copilot to dramatically increase productivity. This includes using these tools for overhauling documentation for our extensive set of APIs, making them easier to understand across the board.
- Using the same AI based development tools to help increase the visibility into our extensive test data, leading to actionable insights to improve quality. We support a broad range of platforms, across a range of service environments, with hundreds of integrated tests run through each. This results in a large amount of data to process to determine viable insights on health of our systems. I took existing tools that provided a small amount of cabable insights, but scaled them up tremendously, using AI data analysis best practices, resulting in dashboards and messaging that calls out health and allows deep dives to determine any issues.
- Architected and built the API front end for an unannounced service with heavy back end requirements. Participated in early research for the set of features, and directly with those building the back end, adding extensive integrated tests along the way.
- Used Unreal Engine extensively for demonstration and performance analysis on the above system.

**META, Lehi, UT****Software Engineer, Principal Level**

Helped architect the core pipeline that prepared content for Meta Avatars, which are available across Meta properties such as Facebook, Instagram, and Quest, supporting over a billion user-created Meta Avatars.

- Interfaced, built code for, and ensured quality in several services, including the service that combined avatars on the back end and one that specialized in real-time image rendering. Collaborated across the team to meet service performance and uptime targets, seeking 99.9% uptime, with goals and progress toward achieving 99.99%. Represented the entire team in preparation for launch readiness for a massive release at Meta Connect in fall 2024. Supported the launch as oncall, fixing more than my fair share of issues as they arose while also using defensive programming to avoid future issues, which resulted in a very smooth launch. 100s of millions of users used the new Meta avatars in the first few months. Used Meta's Llama based coding assistance tools extensively as part of this effort.
- Spearheaded a team of over 20 engineers and technical artists to hit aggressive performance targets, interfaced with other teams on goals, provided continued support in measurement and deep dives of CPU and memory usage, and implemented some of the key tasks needed to hit these targets. This included one that resulted in 20% reduction of time to change avatar features, and another one that reduced initial load execution time by 40%. Improved experience performance on Android devices, Quest, Windows workstation tools, and cloud services.
- Led a team of contractors to build the bulk of the processing building blocks used to generate the new avatar system (graph-based architecture). Acted as the engineering owner of this initiative with, ensuring the means for backward compatibility and versioning and implementing some of the most complex code.
- Maintained great relationships with the technical artists throughout these efforts, providing some of the key content needed for a very flexible avatar system to meet the needs.

**DAZ 3D / TAFI, Salt Lake, UT****April 2020 – November 2022****Senior Software Engineer**

Provided technical leadership and did a lot of hands-on work for a company that has allowed users to build high fidelity characters since the 90s.

- Completed an overhaul of the Avatar SDK Tafi offers to make it a more consistent API and easier to use.
- Developed an Avatar editing experience from scratch, shared as source code using the Avatar SDK. Collaborated with a partner to release it as a standalone Android app.
- Helped the company overhaul its development process to improve communication and go from being more reactive to proactive with its projects, affecting the entire product team.
- Provided technical leadership for an effort to provide 3d models for three different character projects, each with large amount of individual content to manage (tops, bottoms, accessories).
- Built a community of people using offerings, helping and encouraging them to build UGC experiences using 3d models we provided.

**LOOM.AI, Lehi, UT****May 2019 – April 2020****Product Engineer**

Functioned as the hands-on lead for a remote team preparing Unity applications for Windows, Mac, Android, and iOS for partners and consumers using customizable cloud-backed avatars. This company later was acquired by Roblox, and its tech is used to power the higher fidelity Roblox avatar experiences.

- Built solutions ranging from rapid prototypes through production-ready apps.
- Created an app that leveraged audio to drive avatar lip-syncing using a microphone, text-to-speech services, and built-in or streamed audio.
- Provided a premier personalization app, allowing users to start from a photo to create an avatar, then edit many parameters and generate personalized sticker packs.

**MICROSOFT, Redmond, WA****January 2019 – May 2019****Senior Software Engineer, Minecraft Team**

Contributed to a modern, adaptive, cloud-driven storefront on an app that spanned a vast range of devices and form factors (Realms Plus subscription).

- Leveraged experience to prove out and architect cloud-intensive projects, analyzing deep multiplayer networking.
- Acted as tech lead for the team that implemented the Minecraft Android app tips and tutorials.
- Served as a technical advisor for a group that built content for the Minecraft Marketplace.

**XBOX**, Redmond, WA**November 2015 – December 2018****Senior Software Engineer, MR Avatars in Xbox Experiences and Mixed Reality At Work**

Started from the ground floor to bring the next generation of Xbox Avatars to production.

- Organized the engineering tasks needed to make technology choices, completing many of the investigations and providing the model in which these investigations would be done moving forward.
- Managed partnerships and designed, architected, and built applications, pipelines, and cloud services.
- Provided a result that was used by millions of users and reflected the mantra of Creative, Expressive, and Inclusive. Delivered the first system with support for prosthetics, wheelchairs, a vast range of moods, costumes, and clothing, and included things like hair and cloth physics with maximum flexibility in colorization.
- Completed significant groundwork to bring these same Xbox Avatars to the Xbox One shell using live and cloud-rendered controls.
- Implemented offline rendering for Avatars to allow broader use in lower memory. Completed much of the investigative work and the feature work leveraging Azure tech to bring this online. Reduced the size of the output sprite sheets to make them more manageable but still of high quality.

**MICROSOFT**, Seattle, WA**May 2013 - November 2015****Senior Engineering Lead, Music, Video, Reading (MVR) in Operating Systems Group (OSG)**

Led a team developing storefront media apps for Windows, using C++, JS, TS, and HTML.

- Stewarded the team's adoption of an agile model, shipping released apps to production every 2 weeks.
- Helped team transition to combined engineering, in which SDEs and SDETs joined disciplines, overseeing quality and development tasks.
- Managed hiring for the team, seeking out and bringing individuals for interviews for positions on the team.
- Provided technical leadership and individual contributions, including setting up logic to pull from services, doing security reviews, and establishing ownership models.

**MICROSOFT STUDIOS**, Redmond, WA**April 2010 - May 2013****Senior Software Development Lead Engineer**

Delivered results as a hands-on client development lead for Skybox Sports, leading the development of ESPN, MLB, and Sports Hub apps for Xbox 360.

- Supported primarily Lua applications, built on a C++ core, with the capability of being updated at a rapid pace.
- Stewarded leadership initiatives by participating with shiproom and triage meetings, helping plan major and minor releases, building solid processes for developing and managing multiple concurrent releases.
- Managed 4 FTEs and two contractors. Acted as a mentor, providing the right opportunities and feedback to ensure growth in roles and more effectively contribute to the team's success.

**ADDITIONAL RELEVANT EXPERIENCE****LOCKHEED MARTIN**, Manassas, VA**Senior Computer Systems Architect**

Orchestrated Fifth Gear Robotics simulation as the technical lead for a 3d interactive 6-player robotics simulation titled Fifth Gear.

- Assisted a group of Lockheed employees in developing a 3d simulation for the High School level FIRST Robotics Challenge (FRC), a robotics competition for over 200,000 students worldwide, with 42,000 high school students in the FRC program.
- Received \$1 million in funding from Lockheed to expand this simulation for better utility for FRC teams.
- Received a Lockheed Martin Special Recognition Award for Full Spectrum Leadership for efforts on this project.
- Aided the ChemBioRadNuclear (CBRN) defense business area as the primary developer for a CBRN simulator.

**DYNAMIC ANIMATION SYSTEMS**, Fairfax, VA**Co-Lead Engineer**

Helped build a breakthrough system to teach military and civilian law enforcement tactical combat and teamwork skills in a networked instructor-led simulation for this modeling and simulation company with an entertainment department.

- Led a development team of nearly a dozen programmers, supporting the product at trade shows and demos.
- Became the resident expert in networking and multi-device rendering.

**DATA TRANSIT**, San Jose, CA**UI Development Lead**

Attained initiatives for a computer bus analyzer company.

- Executed in conjunction with a team, completed several complex software projects
- Managed the GUI design on two major product lines over 2 to 5 other employees.
- Redesigned the clumsy and unorganized UI code to use a good object-oriented design.

**ALPINE STUDIOS**, American Fork, UT**Technical Programmer**

Programmed using C++ as part of a team of game developers in a summer position.

- Used RenderWare for PS2 and DirectX for Windows to support 3d programming.
- Implemented sound, vehicle physics, front end, 3d rendering, and animation.

**EDUCATION****Bachelor of Science (BS), Computer Engineering**

Brigham Young University, Provo, UT

**VOLUNTEER AFFILIATIONS****CHRISTA McAULIFFE SPACE CENTER (CMSC)**, Volunteer

Taught multiple technical workshops to middle/high school students. Organized efforts for them to contribute to creating content for CMSC missions. Served as a technical representative on a grant from Meta to the CMSC.

**BSA - Scoutmaster**

Received Woodbadge beads for supporting advanced youth training experience requiring a year of intense work.