

Akiah Tullis

Software Engineer | Seattle, WA | akiah-t@proton.me | +1 (986) 229-5264
Portfolio: ill-satisfaction.github.io

SUMMARY

Software engineer who builds tools that make complex real-time systems visible and understandable. Experience spans spatial data visualization (Python/Plotly), interactive UI development in real-time 3D engines (Unreal, Unity/C#), and full-stack web applications (Python). Background in QA provides deep understanding of how to instrument, analyze, and validate system behavior at scale. Published researcher in spatial UI for AR/VR with 4 papers and presentations at NASA's Johnson Space Center and HCI International.

TECHNICAL SKILLS

Languages: Python, C#, C++, JavaScript, HTML/CSS, Arduino (C)

Real-Time / 3D: Unreal Engine (Blueprints, C++), Unity (C#), MRTK, HoloLens 2, Quest 2

Data & Visualization: Plotly/Dash, Excel (data analysis, visualization), Unreal Insights (performance profiling)

Web & Full-Stack: Anvil (Python web framework), HTML/CSS, JavaScript

Tools & Infrastructure: Jenkins, Git, Perforce, Jira, AWS, TestRail, Confluence

Design: UI/UX design, user flows, wireframes, Adobe XD, Adobe Illustrator

Other: Agile/Scrum, technical writing, cross-team collaboration, test planning

EXPERIENCE

SDET / Tools Developer | NeonMachine | Contract

Nov 2025 – Apr 2026 | Remote

- Built a real-time UI widget in Unreal Engine (Blueprints/C++) to capture and display engagement data (TTK, accuracy, per-hit damage breakdowns) during live playtests of a multiplayer FPS, cutting per-feature validation time by ~4 hours across 90+ features.
- Designed and built a radar/resource tracking UI prototype inside the game engine to solve spatial awareness problems for players, advancing from design proposal to working in-engine implementation.
- Implemented a Pipeline State Object (PSO) optimization workflow that reduced rendering cache misses by 41% and cost per miss by 64%, directly improving real-time frame stability.
- Wrote technical analyses of system behavior including a weapons-feel assessment bridging subjective UX observations with engine-level data, and a design proposal for character progression that was accepted by the design team.
- Coached team members on Unreal Insights performance profiling and supported cross-team collaboration with design, engineering, and marketing.

Senior Test Engineer / Tools Developer | Lionbridge Games | Full-Time

Apr 2024 – Feb 2025 | Seattle, WA

- Built a spatial event visualization application in Python (Plotly/Dash) that overlaid 10,000+ events onto 2D level geometry with full filtering by event type, location, origin, and method — enabling level designers and weapon designers to make data-driven decisions about map flow and balance.
- Created 7 Excel-based data visualizations to surface patterns in system performance, distribution models, win rates by team composition, and hit registration accuracy.
- Designed KPI dashboards in Jira used by the full team of 20+ engineers and testers; one dashboard saved a manager ~1 hour of daily reporting work.
- Led a structured retrospective process that improved team communication satisfaction from 4/10 to 8–9/10 across a distributed remote team. Drove platform migration based on data.
- Authored 130+ test suites and maintained 107 pages of documentation. Supported 3 live service releases and 50+ internal playtests.

Game Test Associate | Lionbridge Games | Full-Time

Sep 2023 – Apr 2024 | Boise, ID

- Top bug reporter on a 20+ person team (356 confirmed defects). Promoted to Senior Test Engineer within 8 months based on initiative in test planning, documentation, and onboarding 10 new testers.

Full-Stack Developer / UI Designer | CEO² | Contract

Dec 2022 – Sep 2023 | Hybrid

- Sole engineer and designer on Clarity, a B2B web application (Python/Anvil) for stakeholder alignment through scheduled feedback cycles. Owned the full lifecycle: client requirements, UX/UI design, development, and onboarding content.

XR Developer → **Team Lead** | NASA SUITs Challenge, Boise State University | Research

Jan 2019 – Dec 2021 (3 years) | Boise, ID

- Designed and built the “minimap”: a hands-free 3D spatial UI displaying the user’s real-time position relative to mission-critical waypoints in augmented reality, built in Unity/C#/MRTK for HoloLens 2 and Quest 2.
- Developed AR interface feature prototypes for NASA’s Artemis EVA program including a hands-free procedure manual and a tele-illustration system (3D annotations from mission control rendered in the AR user’s environment).
- Validated computer vision-based spatial tracking in extreme real-world conditions: high-reflectivity sand dunes, snow, volcanic terrain, caves with no natural lighting, and low-connectivity environments.
- Promoted to Team Lead. Directed Agile team through 2.5 development cycles. Grew team from 6 to 15 during COVID; group still active today.
- Authored a 30-page technical proposal accepted by NASA and the Idaho Space Grant Consortium. Presented and demonstrated the system at Johnson Space Center. Co-published 4 research papers.

XR Research Intern | Boise State University (VARScent) | Research

Summer 2020 | Boise, ID

- Built firmware for scent delivery in VR: Arduino code controlling a proprietary micropump, interfaced to Unity via C# with in-game spatial triggers. Developed a test environment and diagnostics; documented frameworks for handoff.

UI Design Intern → **UI Designer** | Nerdy Dragon

Senior Year HS – Post-Graduation |

- Designed UI for client web and mobile applications: translated requirements into user flows, wireframes, and high-fidelity mockups in Adobe XD and Illustrator.

EDUCATION & CERTIFICATIONS

B.S. Games, Interactive Media, and Mobile Development | Boise State University | 2022

HBX CORe (Credential of Readiness) | Harvard Business School Online

PUBLICATIONS

“Extravehicular Intelligence Solution for Lunar Exploration and Research: ARSIS 5.0” — HCI International 2022

“Developing a Mixed Reality Application to Increase Autonomy and Improve Communication in EVA Procedures” — SpaceCHI / MIT Media Lab

“ARSIS 4.0 (Augmented Reality Space Informatics System)” — ICUR, Jul 2021

“ARSIS 4.0 (Augmented Reality Space Informatics System)” — Undergraduate Research Showcase, Scholarworks, Apr 2021