

Branden Turner

Lead Software Engineer

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St. Louis, MO

Highlights

- Co-leads a team of programmers and tech artists that resolve programming and tech art-related issues encountered by Unreal Engine licensees.
- Manages Epic Games' UDN Vendor program, consisting of multiple dev teams assisting Epic's Tech DevRel team in resolving UDN issues.
- Designed and implemented engine release and automated test pipeline with a team to help ship Star Wars: Millennium Falcon - Smuggler's Run.
- Extensive experience with Unreal Engine authoring plugins, modifying engine-level features, and integrating third-party libraries.
- Integrated motion tracking, projection, calibration data, and game engines to create real-time experiences and attractions.

Recent Career History

Lead Software Engineer, DevRel, Epic Games

October 2021 – Present

One of three leads on the Technical Developer Relations (TDR), a mid-sized team.

- Direct reports help devs in multiple industries overcome programming-related challenges with Unreal Engine, including shipping titles.
- Manages functional and technical aspects of reports: career growth planning, role mentorship, and performance management.
- Helped draft team's role competencies and KPIs
- Acts as a TDR hiring manager; prioritizes needs, vets candidates, determines interview panels, evaluates interview results, and makes hiring decisions.
- Manages Epic's UDN Vendor program: external game development studios assisting TDR in resolving licensee issues on UDN.
 - Acts as hiring manager for the program.
 - Coordinates contracting, manages performance, and delegates members of TDR to mentor the program's teams.

DevTools Software Engineer, DevRel, Epic Games

July 2020 – October 2021

Worked as a member of the Tech DevRel team, embedded within Epic's Developer Tools team.

- Assisted licensees with UGS, UBT, UAT, Automated Testing (Gauntlet and Framework), CI/CD Systems, and occasionally Horde.
- Mentored junior engineers in growing their careers, along with educating senior engineers on different facets of the Developer Tools domain
- Resolved hundreds of issues for licensees via submitting bug fixes, creating technical documentation, and direct communication with licensees.
- Led Customer Success' efforts for Epic's UE5 Breaking Changes Guide, detailing workarounds and existing issues with moving from UE4 to UE5.

Imagineer (Software Developer), Walt Disney Imagineering

February 2015 – June 2020

Worked within the Technology Studio to bring new experiences into Disney Parks and Resorts. Created tools and workflows to develop these experiences more effectively. Projects include Star Wars: Millennium Falcon - Smuggler's Run, WEB SLINGERS, collaborating with ILMxLAB, and unannounced projects that combine hardware and software while maintaining performance. Primary languages included C++ and Python, with smatterings of C#, HTML/CSS/JS and Groovy.

Projects

Integration Software Developer

June 2019 – June 2020

WEB SLINGERS: A Spider-Man Adventure

- Reviewed and gave actionable feedback for technical documentation and code
- Authored technical docs detailing the interactive systems of the attraction for future developers, engineers, and maintenance crews
- Implemented runtime engine features, and integrated the attraction with a custom automated test framework to monitor its performance
- Prepared for and assisted technically with multiple demos per week to sometimes wildly different audiences

UE4 Motion Tracking Integrator

March 2016 – May 2016

Flesh and Sand (Carne y Arena) - A VR Experience from ILMxLab

- Provided my implementation of a motion tracking plugin for use with UE4, used during the early development phase of the project
- Assisted with integration and use of motion tracking plugin for iterating on the early creative elements of the project

Generalist Software and Tools Developer

April 2015 – May 2019

Star Wars: Millennium Falcon - Smuggler's Run

- Developed UE4 Automated Testing pipeline, including a set of plugins for UE4, a set of test scripts, and a website for viewing test information
- Created tools for viewing media virtually in an environment that mimics the ride's physical projection setup, saving in travel costs
- Debugged various issues that developed during the project, including Sequencer bugs, content ingestion problems, and determinism issues

Projection System Designer and Integrator

April 2015 – Feb. 2016

ILMxLAB's xDeck (Virtual Production Stage)

- Designed the projection layout for a CAVE system that leverages a smooth, curved surface for display, using internal tools and Maya
- Mounted, installed, and performed intrinsic and extrinsic calibration on cameras and projectors using Gray Code imagery
- Designed and tested, with a team, a pipeline for generating calibration files that could be ingested by UE4 and other 3D Content packages
- Researched and assisted with installation of hardware including computers, projectors, cabling, cameras, and KVM equipment

Technical Skills

Tools - Git, SVN, Mercurial, CVS, Perforce, Jira, Visual Studio, GCC, Make, Command Line, Confluence, VPNs

Mathematics - Linear Algebra, 2D/3D Geometry, Discrete Logic, Splines, Stats, Numerical Approximation

Familiar APIs - OpenGL, DirectX, FMOD, FBX SDK, VRPN, WWise (Authoring Plugins)

Languages - C/C++ (proficient), Python (prof.), JavaScript (comfortable), C# (comf.), Groovy (comf.), x86 (reading)

Misc. - Profiling, crash handling, technical docs, automated tests, networked sim, optimization, debugging

Education

DigiPen Institute of Technology, B.S. CS and Real-Time Interactive Simulation

Graduated 2013