North Hollywood, California
tbujnevicie@gmail.com

Tim Bujnevicie

linkedin.com/in/tbujnevicie
timbujnevicie.com

A programmer with a passion for testing out novel technologies and seeing if I can integrate them into a usable product. My main focus is geared towards Unreal Engine and using it to develop tools and real time applications.

Work Experience

Senior Developer — **Steamroller Technologies** — **Oct 2023–Present**
Mount Dora, FL

- Provided Unreal support for developing an Android thin client that makes use of Unreal's pixel streaming.
- Integrated ORB SLAM3 into Unreal via a plugin for said client to get around ARCore device limitations.
- Developed a prototype Shotgrid config that uses version control instead of a centralized studio network drive.

Software Engineer — **Pure Imagination Studios** — **2016–2023**
Sherman Oaks, CA

- Developed gameplay logic and implemented assets on all the dark rides being developed during my time here.
- Built systems for off-axis camera projection rendering via direct modification of Unreal's source, and also through nDisplay.
- Wrote Unreal wrappers to integrate third party libraries to integrate them into Unreal.
- Developed both Unreal and Unity standalone attractions for museums, exhibits, and amusement parks.
- Helped build their Shotgrid pipeline for both real time and rendered content.
- Developed attraction prototypes using technologies like OpenCV and Stereolabs Zed cameras

Cofounder — **AntiCode** — **2016–2023**
Phoenix, AZ

- Co Founded a company that developed a isomorphic web application specifically for aiding programmers with their debugging issues
- Developed a full stack application with a React frontend and a Django REST API backend for some reason.
- Built a bug bounty system for the site that would take advantage of chained Paypal transactions to provide a revenue stream to support the website.

Research Assistant **WPI** **2014–2014**
Worcester, MA

- Worked on building a virtual reality oil rig simulator system
- Modified the C4 engine to include haptic rumble feedback via ultra low frequency audio for more immersive simulation

Education and Certifications

- **B.Sc. Interactive Media & Game Development,** WorcesterPolytechnic Institute, Massachusetts. **2011–2015**

Technologies and Languages

- Languages: C++, C, C#, Java, Javascript, Python
- Technologies: Unreal, Maya, Unity, Git, Perforce, nDisplay, Shotgrid, Android Studio, Stereolabs, OpenCV

Projects

- **Villian Con Minion Blast** Built a system for synchronizing nDisplay events across nodes, and also built a system to deproject from real world screen space to 3D game space that would account for curved screens and the nDisplay pixel shaders being used.
- **Volkanu - Quest for the Golden Idol -** Wrote the underlying framework that the game was built upon along with a decent amount of the gameplay. Also built a system for off-axis camera projection that doesn't require modification to Unreal's source via nDisplay.
- **JUSTICE LEAGUE: Battle for Metropolis** Implemented off-axis matrix projection via an Unreal source build driven by data exported from a recreation of the ride track in Maya. Created a system for dynamically scaling projections screens when attempting to project them onto moving targets. Also worked on general gameplay and built tools that I used for tuning the media aspect of the ride on site.
- **Reese's Cupfusion** Wrote and integrated everything besides lighting and materials for the project. Tested out implementing Nvidia-Flex for fluid simulation and installed on site.
- **Critter Cam** helped develop an Unreal puppeteering system where an actor would control the movements of a virtual panda, and all facial data would be captured from the actor and mapped onto said virtual panda allowing them to talk as the panda. Created the fur for the panda via Nvidia Hairworks and trained staff on how to build real time remapping profiles and how to operate the project.
- **Dinosphere** Developed a system for scanning colored in pictures of dinosaurs and applying said drawing to the UVs of animated 2D dinosaurs that would roam the screen of the attraction.
- **Batman Bat-Tech Edition mobile** Developed an atlas tool for Maya to generate a VRay lighting atlas that could be applied to a secondary UV channel of the meshes to get around Unity lightmap limitations.