Alain Galvan

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Summary

I'm a graduate research assistant for FIU's OpenHID Lab, a HCI lab part of the High Performance Database Research Center, where my research focuses on low level graphics programming, in addition to solving graphics related problems for other researchers in the lab.
I'm currently pursuing a PhD in Computer Science with a focus in Computer Graphics Software Architecture.

My research was featured in IEEE 3DUI 2017, I've won a number of Hackathons including HackStetson (First), UHack (Third), and have been featured on Codepen, Newgrounds, and PixelJoint for my Open Source work and Personal Projects. I volunteer as a guitarist for Princeton Church of Homestead, as well as a speaker for FIU and the Miami Game Developer Meetup.

Work Experience

Florida International University — Miami, United States

Research Assistant | **OpenHID HPDRC** — *Jun '15 – Current*

- Published several papers in the topics of 3D User Interfaces and Graphics.
- Helped secure 10K in funding for a biosensor based research project.
- Assisted in COP 4813 Web Application Development course, teaching students TypeScript, Node, React, lecturing and grading/giving feedback on assignments.
- Built Unreal Engine 4 multitouch touch extensions, shader plugins.

Software Engineer | **Enterprise Web Services** — *Dec '14 – Jun '15*

- Built Unity scene transition library.
- Created custom Special Effects Shaders for Educational Unity Game.
- Created stylized character models with PBR Textures, Rigs, Animations.

AeroLocate — Miami, United States

Software Engineer — *Dec '13 – Dec '15*

- Forked Three.js to build custom splash page animation.
- Built Angular 1.x/Node application for managing and purchasing aircraft.
- Managed business application with AWS.

Education

Florida International University — Miami, United States

MSc Computer Science — *2017 – Current*
Focus: Computer Graphics

BSc Computer Science — *2012 – 2016*
Capstone Project: Reactive Programming with Vulkan

Publications

Gesture Elicitation for 3D Travel via Multi-Touch and Mid-Air Systems | **3DUI 2017**
A user study on 3D navigation in a environment with 6 degrees of freedom on multitouch and vision based sensors.

Procedural Celestial Rendering for 3D Navigation | **3DUI 2017**
A technique to render a parametric celestial skybox for use as an animated radiance map for PBR with the ability to light environments similar to natural color corrected images from telescopes.

Awards

SudoHacks 2016 | **First** - Our team built a PeopleSoft abstraction application for Universities.
UHack 2016 | **Third** - Our team built a music sight reading application.
Frontpage 6x | **Codepen.io** - Featured for Open Source Work / Articles

Skills

Technical specialties: Vulkan, OpenGL, C++, JavaScript, TypeScript, WebGL, GLSL, Node.js, Python, Rust, Unreal Engine 4, Unity 3D, C#, Java, Zbrush, Blender, PhotoShop, Illustrator, LaTeX
Natural languages: English *(mother tongue)*, Spanish *(mother tongue)*.