Alain Galvan

Alain.xyz • Hi@Alain.xyz • +1 (305) 302-9275 • @Alainxyz • Miami, Florida

Summary

I'm a Computer Science Ph.D. Candidate with a focus in Computer Graphics, Author of the upcoming Vulkan by Example course by Packt Publishing, and Researcher for Florida International University's Open Human Interaction Design (OpenHID) Lab, a lab that focuses on Human Computer Interaction, Computer Graphics, and Hardware Design.

I've published papers to IEEE 3DUI 2017 and IEEE VR 2017, I've won hackathons in universities such as Stetson, University of Miami, and have been featured on the Voices of VR and Codepen for my open source work. I volunteer as a speaker for the Miami Game Dev Meetup and as a guitarist for Princeton Church.

Work Experience

Packt Publishing — London, United Kingdom

Course Author — *May '17 – Present*

- Responsible for the Vulkan by Example video course.
- Created C++ 17 based Vulkan examples for image processing, 2D/3D game development, GPGPU sound processing, machine learning and volumetric rendering through point cloud and surface reconstruction based renderers.

Florida International University — Miami, United States

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

- Published several papers in the topics of 3D User Interfaces, HCI, and Graphics.
- Helped secure 10K in funding for a biosensor/virtual reality 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 Windows multitouch extensions, shader plugins.

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

- Created custom shader transition library for Educational Unity Game.
- Created stylized character models with PBR Textures, Rigs, Animations.

Education

Florida International University — Miami, United States

MSc Computer Science — *2017 – Current*

Focus: Computer Graphics
Relevant Coursework: Computational Geometry, Graph Theory, Computer Graphics

BSc Computer Science — *2012 – 2016*

Capstone Project: Reactive Programming with Vulkan
Relevant Coursework: Principals of Computer Graphics, Computational Geometry, Graph Theory

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.

Towards a 3D VPL to Increase Number of Women in Computer Science Education | **IEEE VR 2017**
A user study on virtual reality programming diagrams. We believe that the direction of our research will help increase the recruitment and retention of women in CS.

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.
Frontpage 6x | **Codepen.io** - Featured for Open Source Work / Articles

Skills

Natural languages: English *(mother tongue)*, Spanish *(mother tongue)*.