LeJon McGowan

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Education

Cal Poly San Luis Obispo **9/2012 - 6/2017**

Bachelor of Science: Software Engineering
Minor: Computing for Interactive Arts

Employment

Inten, Zenith Insurance IT **6/2013 - 9/2013**

- Implemented front-end intranet site for consolidating and diplaying important data analytics on company IT servers

Developer, Nexus Shift Games **12/2014 - Present**

- Main developer for a large-scale android app featuring an upcoming, custom tabletop RPG campaign
- Integrated several technologies, including the game framework LibGDX and asynchronous library RxJava
- Constructed architecture for a creature pipeline. Includes a JSON structure to define a monster's hierarchy, and a custom application that allows designers to create new creatures

Languages/Tools

C/C++	*OpenGL*	*Android*	*Linux and Windows OS*
CMake	*Java*	*Python*	*HTML/CSS/Javascript*
Maya	*Unreal Engine 4*	*Unity*	*SVN, Git*

Projects

OpenGL 3D L-System **12/2014**

- Applied concept of tutrle graphics to create a proceduaral generation structure
- Implemented several famous fractals, including the dragon curve, the Koch snowflake, and the Sierpenski Triangle
- Used a custom generation algorithm to create a 3d tree and simulate basic wind

General Dynamics Sense and Avoid Air Traffic **9/2015-6/2016**

- Created high-level mocks and UML diagrams to communicate layered software structure
- Compared several different algorithms to determine best approach to consolidating, interpreting, and deciding on how to guide a drone
- Made use of unit and integration tests to ensure correct functionality

Houdini Computational Fluid Dynamics Plugin **12/2016 - Present**

- Designing solver with scalability of 2D and 3D in mind
- Comparing and using different time step, advection, and diffusiuon equations to properly simulate Eulerian fluids
- Exporting created mesh to Houdini to create high quality, 3D scene

Monte Carlo Ray Tracer **3/2016-6/2016, 12/2016 - Present**

- Learned of and implemented cameras, intersection of polyhedra, materials, reflections and refractions
- Made use of Monte Carlo sampling to create accurrate lighting, and used BVH acceleration to minimize intersection tests
- Currently re-designingbased on Matt Pharr's *Physically Based Rendering* for features like textures and volumetric scattering

Competitions

Intel XDK Gane Hackathon, Cal Poly **2/2015**

- Created a mobile, Tower-defense game in 24 hours using Intel's new XDK Javascript framework
- Featured by Intel at Game Developer Conference 2015

Global Game Jam, Cal Poly **1/2015**

- 2nd place game. Made with c++ library SFML

Cal hacks, University of California, Berkely **11/2014**

- Developed Chromecast application for centralized collaboration