

Akshay Sudhakar Loke

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Technical skills

- **Languages:** Obj-C, C++, C#, C, Python, Java, JavaScript
- **GPU Specific:** GLSL, Cg, CUDA
- **Frameworks:** iOS, OpenGL, Unity3D, openFrameworks, Processing
- **Hardware:** MS Kinect, Panasonic D-Imager Depth Cam, SICK Lasers, Capacitive touchscreens

Professional Experience

Byte: Graphics Engineer and iOS Developer Oct 2015 - Present

- Involved in Rendering Engine and app development in fun and quirky social apps.
 - **Unreleased app:** Developed Rendering Engine for real-time processing and transmission of video with multiple overlaid graphical layers such as Smooth Transient Drawing, Live Typing Bubbles, Animated Stickers. Ensured that app runs at 60fps and CPU utilization is under 50fps even with video decoding/encoding.
 - **Peach:** Developed some cool prototype features for this Social Journal/Network app, including a live 3D panorama which responded to device motion for scrolling. Also contributed to Android app dev.
 - **Byte:** Involved in efforts to migrate the app to an OpenGL backend to optimize rendering the various layers of media in a single Byte post.
- Used **Obj-C** with **OpenGL** and **GLSL** shaders.

Gameloft: Senior 3D Graphics Engineer and Gameplay Developer Jan 2013 - Jul 2015

- Involved in the creation of 2 well received **iOS** games.
 - **Spider-Man Unlimited:** Boss AI | Graphics and Performance optimizations | Automatic Asset Packaging for randomly generated Content | Client-side DLC Management System
 - **Cars: Fast as Lightning:** Garage Mode | System to efficiently load/unload/render Hi-res assets for menu, in-game prompts, shop carousel | Special Effects | Graphics and Performance optimizations
- Used **C++** for game engine with **GLSL** shaders. Also **Python** for DLC auto-packaging scripts.

Inwindow Outdoor: Lead Developer June 2010 - Dec 2012

- Led the technical direction and execution for implementing **Interactive Advertising Experiences** for large-scale public spaces.
- Worked with technologies like **GPU Processing, Augmented Reality, Real-time Image Effects and Processing, Gaming, Computer Vision** and a variety of hardware, including **Microsoft Kinect**, other **Time-of-Flight 3D cameras**, industrial grade **SICK Lasers** and capacitive touch-screens.
 - **Beneful:** Autonomous Behavioral AI for Dogs | Fur Shader | MS Kinect Gesture Interaction, |Pedestrian Tracking using Lasers
 - **Person Of Interest:** Face Tracking | Post-Processing Shaders
 - **Rango:** Multiple Background Subtractions for unique Blend-Into-Environment effect | Toon Shader
 - **Storm Chasers:** Real-time Image Compositing with Background Subtraction
 - **PNC:** Gesture Recognition using webcams (no depth data)
- Used **C++**, **openFrameworks**, **OpenGL**, **GLSL**, **CUDA** and **Unity3D**.

SilverTree Media: Game Developer

Mar 2009 - May 2010

- Gameplay Developer on the **Tron Legacy Light Cycles** game developed for **Disney Interactive Studios and Cordy** a fast, fun, physics based 2.5D platformer game.
 - **Tron Legacy Light Cycles:** Light Cycle and Light Trail physics and rendering | Procedural Racetrack Generation
 - **Cordy:** Platforming mechanics | Cord simulation | Special Effects
- Used **Unity3D**

University of Pennsylvania: Teaching Assistant

Sep 2008 - Dec 2008

- Worked with **Dr. Stephen Lane** for the **CIS-562 Computer Animation** course.

Disney Animation/Avalanche Software (Disney Interactive): Programmer Intern

*Jun-Aug
2008*

- The project's aim was to use the Avalanche's game engine to aid in fast rendering and visualization of assets used by Disney Animation artists to make the animation pipeline more efficient.
- Used **Maya C++ API, MEL** scripting and **C++** on Windows and Linux platforms.

Jump Games: Senior 3D Game Developer

Jan 2007 - Jun 2007

- Worked on **Fido Bowling Pro**, a 3D Ten-pin Bowling game on phones using the **J2ME** platform. The game featured accurate, real-time physics for ball-pin interactions on low-end hardware before the advent of smartphones.
- Used **Java**

Education

- University of Pennsylvania, School of Engineering and Applied Sciences, Philadelphia.

MSE in Computer Graphics and Game Technology - Dec 2008.

GPA: **3.52/4.0.**

Relevant Coursework: Computer Graphics, Computer Animation, GPU programming, Maya Modeling, Computer Vision, Drawing