Trung Le

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Skills

Graphics: Vulkan, WebGL, OpenGL
Programming: C/C++, Python, C#, Javascript
Software: Unity, Unreal, Houdini

Experience

ML ENGINEER, GOOGLE STADIA - OCTOBER 2019 - PRESENT

Computer graphics research.

AI PROGRAMMER, ROCKSTAR GAMES - JULY 2017 - OCTOBER 2019

Analyzed and optimized performance for AI systems in Red Dead Redemption II, Rockstar's narrative-driven, open world video game with deep AI interactions. Specifically worked to improve the C++ game code for LOD management of AI physics, weapon and combat systems, transport systems, and pathfinding systems for PS4 and XBox. Worked on general AI and animation optimization for several specific scripted in-game missions as well as miscellaneous performance bugs in the final weeks before the game release.

TOOLS PROGRAMMER INTERN, EPIC GAMES - JUNE 2016 - SEPTEMBER 2016

Implemented VR editing tools for the Unreal Engine 4. The tools include terrain editing, virtual keyboards, and foliage painting for level editing. These tools are introduced in Unreal 4.13 and 4.14 releases.

FIRMWARE ENGINEER, JAWBONE, SEATTLE WA – 2012-2014

Developed infrastructure and applications for the UP3 fitness wristband on ARM Cortex and iOS platforms. This includes the BTLE protocol, authentication and encryption between device and mobile app, activity classification collection tools, peripheral drivers, USB interface, and UX.

RESEARCH ASSISTANT, UW SENSOR LAB+INTEL LAB, SEATTLE WA – 2010-2012

Designed a GUI with Python QT for the systems used in Wireless Resonant Energy Link (WREL) research. The software supports data collection, data visualization, wireless control, and power diagnostics. Over the years, this software has been forked and extended for use in other research and at startup company Wibotic.

Education

University of Pennsylvania, PA – MSE Computer Graphics, May 2017,   GPA: 3.71/4.0
University of Washington, WA – BS Electrical Engineering, June 2012,   GPA: 3.51/4.0

Projects

(please see more at www.trungtuanle.com for a complete portfolio)

VULKAN HYBRID RENDERER, RENDERER - 2016

Implemented in Vulkan a hybrid renderer that combined deferred shading for primary ray intersections and the used GPU ray tracing to render the scene. The approach allowed for shadow feelers, reflection, and refraction, on top of a rasterizer.

PROJECT EM, AN VOICE-CONTROL 3D PLATFORM GAME IN UNREAL WITH ALEXA – 2016

Lead Unreal programmer. Second place of PennApps XIV. Winner of the use for Alexa. Winner of best AR/VR application.

CUDA RASTERIZER WITH K-BUFFER AND GLTF, COURSE PROJECT – 2016

Programmed in C++ and CUDA. Parallelize rasterization per primitive triangle with k-buffer support for transparency.

Invited talks

WebGL2 Samples Pack
Khronos event, GDC 2016
Trung Le and Shuai Shao

WebGL2 Samples Pack
NYC WebGL Meetup 2016
Trung Le and Shuai Shao