# Trung Le

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## Skills

**Proficent Languages:** C/C++, GPU shader programming, C#
**Secondary Languages:** Python, Rust, Swift, Javascript
**Graphics:** Vulkan, WebGL, OpenGL
**Tools**: Unity, Unreal, Houdini, Blender

## Experience

**GRAPHICS ENGINEER**, **DEVIATION GAMES - MAY 2021 - PRESENT**
Designed and implemented real-time signed distance field ray marching in Unreal for an unannounced AAA title.

**ML ENGINEER**, **GOOGLE STADIA - OCTOBER 2019 - MAY 2021**
Advocated for and applied neural rendering research toward solving real-time graphics problems for video games. My focuses were AI art generation and high fidelity fur rendering. Worked on generating custom 3D datasets using Houdini and Blender, training generative machine learning models with Google infrastructure, parameter tuning, and interfacing novel workflows with artists.

**AI PROGRAMMER**, **ROCKSTAR GAMES - JULY 2017 - OCTOBER 2019**
Analyzed and optimized performance for AI systems in Red Dead Redemption II, Rockstar's premier narrative-driven, open world video game title 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 release.

**TOOLS PROGRAMMER INTERN**, **EPIC GAMES - JUNE 2016 - SEPTEMBER 2016**
Implemented VR editing tools for Unreal Engine 4. The tools include terrain editing, virtual keyboards, and foliage painting for level editing. These tools were introduced in the Unreal 4.13 and 4.14 updates.

**FIRMWARE ENGINEER**, **JAWBONE, SEATTLE WA – 2012-2014**
Developed infrastructure and applications for the UP3 fitness wristband on ARM Cortex and iOS platforms. This included the BTLE protocol, authentication and encryption between devices and the 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 extended for use at the startup company Wibotic and in other research ventures.

## 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)