

BILL TRUONG

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PROFESSIONAL SUMMARY

Unity Engineer & Technical Artist with deep expertise in **Advanced C# System Design** and **Shader Programming (HLSL)**. Delivered complex gameplay systems backed by performant, custom-engineered graphics tools. Successfully optimized rendering pipelines for constrained platforms (Meta Quest), boosting performance by **30%**. Recognized for presenting high-end Digital Twin solutions to **NVIDIA leadership**.

TECHNICAL SKILLS

Languages: C# (Expert), Python (Automation/Tools), HLSL/Cg (Advanced), C++, JavaScript, Swift, SQL
Unity Engine: Unity 2022/6 LTS, DOTS (ECS/Jobs), Universal Render Pipeline (URP), High Definition Render Pipeline (HDRP), Editor Scripting, Addressables, Profiling (Deep Profile/Memory Profiler).
Graphics & Tech Art: Custom Shaders (HLSL/Shader Graph), VFX Graph, Compute Shaders, GPU Instancing, Render Graph API, Raymarching, Post-Processing Stack.
Backend & Networking: Photon Fusion, SmartFox Server, RESTful APIs, Firebase, Real-time Replication, Multi-threading.
Tools & Platforms: NVIDIA Omniverse, Meta Quest SDK, Blender (Python API), RenderDoc, Git/GitLab, Jira, Confluence, Figma, Adobe Substance Painter.

PROFESSIONAL EXPERIENCE

Curly Blue (Shmackle VR)

Ho Chi Minh City, Vietnam

Technical Artist (Promoted) & Unity Developer

Apr 2025 – Present

- **Graphics Pipeline Overhaul:** Spearheaded a complete visual modernization of the flagship title *Shmackle VR*. Replaced legacy unlit assets with a custom-engineered rendering pipeline featuring Toon Shading, Screen-Space Outlines, and Dissolve effects using **HLSL** and **Shader Graph**.
- **VR Performance Optimization:** Achieved a locked **90 FPS** on Meta Quest standalone hardware (previously unstable at 72 FPS) by implementing aggressive optimization techniques, including GPU instancing, texture atlasing, and custom occlusion culling algorithms.
- **Multiplayer Architecture:** Engineered the core networking layer using **Photon Fusion**, enabling synchronized physics interactions and state management for complex social sandbox gameplay supporting 20+ concurrent users.
- **Feature Leadership:** Led the development of the "Shooting Range" update, creating a modular weapon system and dynamic target pooling that resulted in a measurable increase in daily active user (DAU) engagement.
- **UX Engineering:** Designed and implemented the "Shmackle Pad" diegetic UI system and dynamic FOV adjustment algorithms to minimize motion sickness, significantly improving user retention metrics.

FPT IS (akaVerse)

Ho Chi Minh City, Vietnam

Software Engineer (R&D) & Technical Lead

Jul 2024 – Apr 2025

- **Strategic R&D Presentation:** Selected as the key technical presenter for a high-profile demonstration to **NVIDIA CEO Jensen Huang**, showcasing a real-time bi-directional sync pipeline between Unity and NVIDIA Omniverse, facilitating industrial digital twin applications.
- **Workflow Automation:** Developed "Bill Utils," a comprehensive Python-based automation suite for Blender and Unity. This tool streamlined the heritage digitization pipeline, reducing complex 3D scene setup times from **weeks to a single-click operation**.
- **Mobile Optimization (GameVerse Finalist):** Acted as the Core Developer for *Animal Push Royale*, a GameVerse 2024 finalist. Boosted performance by **300%** on low-end devices by rewriting water shader and optimizing GC.
- **Industrial Simulation:** Integrated Compute Shaders to enable the rendering of massive CAD datasets in WebGL environments, overcoming browser memory limitations for enterprise clients.

Gameloft

Ho Chi Minh City, Vietnam

Gameplay Programmer

Jun 2023 – Dec 2023

- **Enterprise Scale Development:** Contributed to *Applaydu* (50M+ downloads), adhering to strict Agile/Scrum methodologies and Clean Code practices within a large-scale international team.
- **Feature Implementation:** Engineered core gameplay mechanics for the "Treasure Toss" and "Animalody" modules, implementing robust Design Patterns (Observer, Command, Singleton) to ensure code modularity and testability.
- **Cross-Disciplinary Collaboration:** Worked closely with Game Designers and QA to iterate on game feel, ensuring mechanics met the high quality standards required by the licensor (Ferrero).

Golden Sea Studio

Unity Developer

Ho Chi Minh City, Vietnam

Jan 2024 – Mar 2024

- **Rapid Prototyping:** Executed full-cycle development for multiple Hyper Casual titles under tight 1-2 month deadlines. Successfully shipped titles like *Merge Fruit*, moving from concept to Gold Master swiftly.
- **Monetization Integration:** Implemented third-party SDKs (Ads, Analytics) and optimized build sizes to maximize user acquisition rates in competitive mobile markets.

KEY PROJECTS & OPEN SOURCE

Kindly's Promise (Project Anchor) | Personal Indie Product

Unity URP, C#, HLSL

- Developed a vertical slice of a narrative Sci-Fi adventure game acting as both Solo Developer and Technical Artist.
- **Rendering:** Architected a custom render pipeline featuring a "See-Through Dissolve" mechanic utilizing Stencil Buffers and a dynamic Cel-Shading solution.
- **Systems:** Built a modular Interaction System and non-linear Dialogue Engine to support complex branching narratives.

Bill Biome Shader | Technical Art Tool

HLSL, GPU Instancing

- Engineered a stylized environment rendering suite optimized for mobile devices using **GPU Instancing**.
- Created a custom Editor Painting Tool allowing artists to paint instanced geometry directly onto terrain with undo/redo support, bypassing standard Unity terrain overhead.

Bill SSSOutline (URP) | Graphics Programming

Render Graph API

- Implemented a Screen-Space Outline Render Feature using the URP **Render Graph** system.
- Solved common depth-occlusion artifacts found in standard Sobel algorithms by implementing advanced depth-normal sensitivity checks.

Pro Atlas Baker | Pipeline Tool

Python, Blender API

- Authored a Blender Python script to automate texture atlasing and UV packing, significantly reducing draw calls for game assets.

LEADERSHIP & COMMUNITY

FullHouseDev

Game Development Instructor

Remote

Sep 2024 – Present

- Designed and delivered advanced curriculum on Unity Architecture and Shader Development, translating complex engineering concepts into digestible lessons for aspiring developers.

Content Creator (Bill The Dev)

Technical Writer & Educator

YouTube, LinkedIn

2023 – Present

- Maintains a technical blog and video channel focusing on Unity Optimization and Graphics Programming.
- Active contributor to Open Source, providing tools like *Responsive WebGL Template* to the community.

EDUCATION

FPT University

Bachelor of Software Engineering

Ho Chi Minh City, Vietnam

2022 – 2025

- **Talent Scholarship:** Awarded 30% tuition scholarship for academic excellence (Top 30% of 10,000+ candidates).
- **Relevant Coursework:** Data Structures & Algorithms, Computer Graphics, Software Architecture, 3D Mathematics.

EMASI Van Phuc International School

High School Diploma (Honors) - GPA 9.2/10

Ho Chi Minh City

2019 – 2022

CERTIFICATIONS

Unity Certified: Complete C# Unity Game Developer 2D (Udemy/GameDev.tv)

Languages: IELTS 6.0

Awards: GameVerse 2024 Finalist (Animal Push Royale)