

# 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

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### 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 SSOutline (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

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### 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

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### 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

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

**Languages:** IELTS 6.0

**Awards:** GameVerse 2024 Finalist (Animal Push Royale)