

Wanli (Lee) Lu Technical Designer

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Core Skills: UE5 (C++ / Blueprint / GAS) | Editor & Tooling (UE Python / AI-assisted workflows) | Combat & AI Systems Design | Perforce & Git

Education

University of Utah | M.S. in Entertainment Arts & Engineering (EAE), Engineering Track Salt Lake City, UT | Sep 2025 – May 2027
Pennsylvania State University | B.S. in Computer Science, Math Minor State College, PA | Sep 2019 – Dec 2024

Experience

Technical Designer (Intern) | miHoYo | Unannounced Project May 2026 – Jun 2026

- Built a natural-language editor toolchain on **UE Python + MCP** (Rules / Skills / Agents), letting designers drive Blueprint and scene operations from the IDE via natural language, greatly shortening level-blockout iteration
- Worked deep in the **World Partition** open-world workflow; built automated tools to detect and locate character-scene collision issues, replacing manual point-by-point inspection with batch tooling
- Drove adoption of AI-assisted development within the team and authored tooling standards and workflow docs, lowering collaboration cost

AI Game Designer (Intern) | Giant Interactive Group | Unannounced Project Jul 2026 – Sep 2026

- Designed and drove the implementation of new-player onboarding systems, including a **guidance system**, **red-dot notification system**, and **tutorial queue system**, shaping the first-time-user flow and information pacing
- Defined system trigger conditions, priorities, and state-flow rules from a design perspective, partnering with engineers to ship and iterate on features

Backend Developer (Intern) | Tencent | 2021 Digital Ecosystem Summit Jan 2021 – Aug 2021

- Built multi-layer backend APIs and the data layer with **Java / Spring Boot** (PostgreSQL / MySQL / Redis), supporting stable operation of the summit's online systems

Certifications & Languages

Epic Games Unreal Authorized Instructor (Jan 2026) | Epic Games Game Design Professional Certificate (Feb 2025) | GRE 335 + 4.5 | TOEFL 108

Publication

First Author | Unreal Engine Nanite Foliage Shadow Imposter | SPIE Aug 2023

- Proposed a “Shadow Imposter + non-shadow-casting foliage” scheme to replace dynamic-shadow foliage, enabling dynamic/static shadow switching for high-cost WPO-enabled Nanite meshes
- Built alpha-card tree models, multi-level LODs, and textures in Blender / UE, and documented the optimization pipeline

Projects

Stateflow Combat Framework (UE5 / C++) | Lead Gameplay Programmer • Technical Designer Jan 2026 – Present

State-driven action combat framework built on GAS and the Unreal Animation Framework; targeting release on Feb / Epic Games Store

- Designed the combat loop around a “state-driven” core — combos, dodges, block/parry, hit reactions, and enemy AI as composable states, **so designers extend new moves via data config without touching framework code**
- Implemented synchronized two-character finishers (Paired Finisher) using **Contextual Anim Scene (CAS)**, handling dual-actor alignment, animation sync, and interrupt rules
- Architected a reusable Gameplay Ability / Effect / Attribute / Cue system to centrally manage combat state flow and presentation triggers
- Integrated and customized the MetaHuman pipeline, extending Story Framework and Narrative Tales for gameplay-event-driven narrative triggers

Bubba Yuga (UE5) | Lead Programmer • Gameplay Designer Oct 2025 – Dec 2025

Chained Together-style local two-player co-op physics puzzler: two sisters bound by a magic chain cooperate physically to rescue children and break a curse

- Designed and implemented the chain physics system (**Physics Constraint / Handle**), using a state machine to map physical behavior to animation, supporting swinging, pulling, and throwing as core mechanics
- Built local two-player enhanced input (gamepad support); owned Perforce version control and the **full Steam release pipeline** (Depot / branches / release config), shipping the PC build

Forgetful Roots VR (UE5) | Lead Programmer • VR Interaction Design Sep 2025 – Oct 2025

VR narrative game centered on three days of memory in the life of an elder living with Alzheimer's

- Designed and implemented core grab-interaction components (two-hand grab, distance pull, climbing, driving, shooting) and a Twin-Stick locomotion scheme
- Built a multi-level VR UMG menu system (custom pointer, view-following UI, and other comfort optimizations); owned full-system integration and final QA delivery

Games

Action / Souls-like: Elden Ring, Sekiro, Black Myth: Wukong, Where Winds Meet (1000+ hrs) **Competitive:** DOTA 2 (NA Rank 132), Apex, Deadlock **Co-op:** It Takes Two, Human: Fall Flat

Roguelite: Risk of Rain 2, Slay the Spire 2 **Other:** Left 4 Dead 2, Genshin, Star Rail, Baldur's Gate 3

Portfolio

Stateflow Combat Framework (UE5 / C++ / GAS)



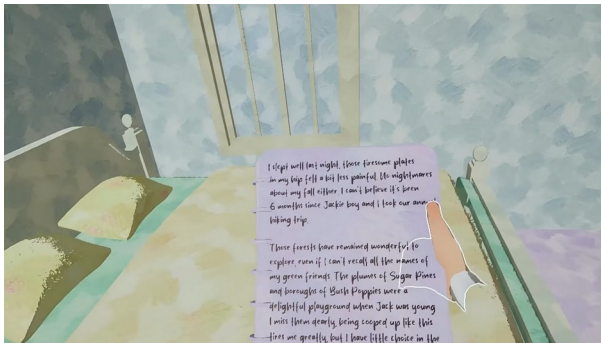
Left: CAS synchronized finisher (Paired Finisher) Right: live GAS debugging (damage resolution / CommitAbility / GameplayCue trigger chain)

Bubba Yuga (UE5 • two-player co-op physics puzzler)



Left: rope pull Right: chain zipline

Forgetful Roots VR (UE5 • VR narrative)



Left: diary reading interaction Right: NPC dialogue system & enhanced physics grab | More demos: thenakedgamedev.com