

## ABOUT ME

Creative AR/VR developer with a passion for leading teams and delivering high-quality, immersive experiences for artists and users. Strong background in AI-driven tools, scripting, and interactive design.

## CREATIVE SKILLS

Autodesk Maya, ZBrush, Substance Painter, Adobe, Creative Suite, UE4, ComfyUI, Houdini

## TECHNICAL SKILLS

JavaScript, GLSL, Lua, C++, HTML/CSS, Java, Python, Agile development, Git, Perforce, Prompt Engineering

## EXPERIENCE

### TikTok

San Francisco Bay Area, CA

#### Mid-Level AR Interactive Engineer | January 2024 – Present

- Core software engineer and technical artist for TikTok Effect House's recently launched "[Create with AI](#)" feature; An **AI-assisted tool** that generates AR effects via a chat bot; Generated **10k+ effects** with a majority from novice users
- Spearheaded the development of an AI-driven and scalable system capable of building parameterized gamified effects.
- Introduced an efficient modular logic framework in Typescript to handle game mechanics and auto-generate visual scripting logic to drive gameplay flow.
- Facilitated business planning with product managers, design leads, and RDs to ideate and implement new features from concept to technical execution. Established best practices for cross-functional collaboration in an evolving pipeline

#### Junior AR Interactive Engineer | Aug 2022 – January 2024

- Prototyped and released **50+ viral AR camera effects** for the TikTok app and branded partnerships used by 10M+ users globally; Optimized performance for every effect to adhere to strict device performance restrictions.
- Identified production bottle necks, and independently **build internal tools and pipelines** to streamline effect production and collaboration between Interactive Engineers, designers, and core tooling engineers, improving efficiency by 25+%
- Represented the Effect Team at conferences, lead speaker at our first [TikTok's Open House](#), and actively engage with and provide technical support for the Effect House creator community

### TikTok

Remote

#### AR Interactive Engineer Intern | May 2021 – August 2021

- Directed my own gamified effect which allows users to create, play, and share their own 2D arcade game.
- Developed a robust collision system and methods for hashing game levels in our internal engine using Lua.
- Worked with other engineers on our innovative Hackathon Project, TikTok Trivia – presenting a new way for streamers to interact with audiences through polls and quiz games.

#### Computer Graphics Research Intern | May 2019 – August 2020

- Project aiming to produce a parameterized [3D/AR visualised simulation](#) of crowd processions in ancient civilizations
- Reconstructed a 3D model with accurate terrain and structures of Pachacamac, Peru, by writing a MEL/python script to convert Sketchup drawings to 3D objects in Autodesk Maya, for use in UE4. Developed an interactive UI using the UE4 blueprint system to allow users to manipulate the time of day, weather, and building decay/materials
- Modelled and textured clothing from the period using Marvelous Designer. Rigged and animated idle and walk cycles for agent movement in the simulation

### University of Pennsylvania

Philadelphia, PA

## PROJECTS

### [Procedural Terrariums](#)

#### Developer | Independent Senior Thesis

- Using Houdini, the project delivered a solution to procedurally generate terrariums, succulent plants, and décor
- Terrarium design can be customized via seeded randomization, or painted areas to self-specify areas for different plants and terrarium features to spawn.

### [Mini Minecraft](#)

#### Developer | Team Project

- Worked in a team of three to build a miniature replica of Minecraft in Qt Creator. Responsible for procedural terrain using noise functions, custom biomes and textures, block animations, and efficient rendering across different vertex buffer objects

### Monte Carlo Path Tracer

#### Developer | Independent Final Project

- Built a path tracer from the ground up. Reliably able to load custom .json files and render scenes with naïve, direct lighting integration, or multiple importance sampling with global illumination. Capable of rendering constructive solid geometry, and different camera types

### Friend.ly

#### Full-Stack Web Developer and UX Designer | Team Project

- Worked extensively in a team of three to build and deploy a social media site with posts, chat, and video livestream features. Responsible for video livestream using Twilio API, user authentication, UI/UX design

## EDUCATION

### University of Pennsylvania

Aug 2018 – May 2022

#### BSE in Computer Graphics | Philadelphia, PA

- Interdisciplinary major in computer science and visual arts

**Involved in:** Co-President of ACM SIGGRAPH chapter, Teaching Assistant (Computer Graphics, 3D Modelling)