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Philadelphia, PA

#### **ABOUT ME**

From Hong Kong, an artist and developer passionate computer graphics, animation, and game development.

#### **CREATIVE SKILLS**

Maya, ZBrush, Substance Painter, Adobe Creative Suite, UE4

#### **TECHNICAL SKILLS**

C++, Lua, HLSL, JavaScript, HTML/CSS, Java, Python, Agile development, Git

# **EDUCATION**

**University of Pennsylvania** Jan 2021 - Dec 2022

University of Pennsylvania

Aug 2018 - May 2022

# MS in Computer Graphics and Game Technology | Philadelphia, PA

Pursuing an accelerated master's degree concurrently with my bachelors

#### BSE in Digital Media Design | Philadelphia, PA

Interdisciplinary major in computer science and visual arts with a GPA of 3.75
 Involved in: Co-President of ACM SIGGRAPH chapter, Marketing Chair for annual Asian American Heritage Week Celebration, Web Designer and Illustrator for the Daily Pennsylvanian Newspaper
 Coursework in: Computer Animation, Rendering, Procedural Graphics, Web Development

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#### **EXPERIENCE**

# AR Interactive Engineer Intern June 2021 - Aug 2021

#### TikTok | Mountain View, CA

- 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 Amazing Engine using Lua. Designed custom 2D assets, sprite animations, and gameplay. Accepted for continued production; To be released.
- Lead Interactive Engineer on a vaccine awareness filter now released on the TikTok-Africa platform.
- Worked with FTEs on our innovative Hackathon Project, TikTok Trivia presenting a new way for streamers to
  interact with audiences through polls and quiz games. Collaborated with DouYin engineers to bring interactive LIVE
  features and UI to the US platform. Won a team award.

# Computer Graphics Research Intern

May 2019 - Aug 2020

#### University of Pennsylvania | Philadelphia, PA

- Project aiming to produce a parameterised 3D/AR visualised simulation of crowd processions in ancient times.
- (Summer 2) Reconstructed a 3D model with accurate terrain and structures of Pachacamac, Peru using Sketchup and Autodesk Maya, for use in Unreal Engine 4. Developed an interactive UI using the UE4 blueprint system to allow users to manipulate the time of day, weather, and building decay/materials
- (Summer 1) Modelled and textured clothing from the period using Marvelous Designer. Rigged and animated idle and walk cycles for agent movement in the simulation

# **Teaching Assistant**

Aug 2019 - Present

#### University of Pennsylvania | Philadelphia, PA

Teaching assistant for undergraduate and graduate level courses

#### CIS460/560 Introduction to Computer Graphics

 Host office hours twice a week to help students debug C++ code and answer any questions regarding basic CG concepts including rasterization, procedural terrain,

### CIS 106 Introduction to 3D Modelling (Head TA)

Successfully improved and restructured the class for asynchronous learning during the COVID-19
 Pandemic by designing my own lesson plan, teaching materials, pre-recorded tutorials, for students new to Maya

# **PROJECTS**

# **Friend.ly**

3 months

# Monte Carlo Path tracer

3 months

# **Mini Minecraft**

2 months

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

 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

#### 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

#### 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