

# Aaron Jiang

aajiang@seas.upenn.edu | aaron-jiang.com | github.com/terskayl | artstation.com/terskayl

## EDUCATION

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**University of Pennsylvania** · Philadelphia, PA

*Master of Science in Engineering in Computer Graphics and Game Technology*

Expected May 2026

*Bachelor of Science in Engineering in Digital Media Design*

Expected May 2026

**Relevant Coursework:** Advanced Graphics Rendering, Interactive Computer Graphics, Procedural Graphics,

Data Structures and Algorithms, Computer Systems, Artificial Intelligence, Linear Algebra,

Computer Animation, Advanced 3-D Modeling, VR for Artists, Procedural Design Systems      GPA: 4.00/4.00

## EXPERIENCE

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### XAVATAR

Remote

3D Modeling and Animation Intern

Nov 2023–July 2024

- Designed and developed a "budget motion-capture" pipeline that processes hand and head tracking data from Oculus Quest headsets into character rig animation data in Blender and Unreal
- Created VR web app using Wonderland Engine with virtual UI to control, record, and export performances
- Wrote Blender Python script to convert positional tracking data into rotational bone data, and apply it to the rig

### UNIVERSITY OF PENNSYLVANIA

Philadelphia, PA

CIS 4600 Teaching Assistant - Interactive Computer Graphics

August 2024–Present

CIS 1600 Teaching Assistant - Mathematical Foundations of Computer Science

Sept 2023–July 2024

- *Rubrics Committee Head* starting Jan 2024: Led creation of homework rubrics in a committee of 7 other TAs
- Led weekly recitation for 20 students on discrete math, proofs, and probability, held office hours

Residential Teaching Assistant - Computer Graphics - Engineering Summer Academy at Penn

July 2023

## PROJECTS

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### VR Paint

Aug 2024

A texture-painting web app for virtual reality users built using Wonderland and **WebGL**. Import 3D models and paint and export UV-aligned textures. GPU-accelerated to handle large textures and minimize lag, features robust layer and undo system. Contains customizable brush radius, opacity, falloff, and spacing

### Movable Pivot

July 2024

Developed Blender addon using **Blender Python** to dynamically move the pivot point of objects during animation. Utilizes a control bone with a parent-child relationship to cancel out transforms during pivot point translation across the timeline. Removes the need to animate location during offset rotations, simplifying rigid-body animation

### Mini-Minecraft

Dec 2023

Developed a voxel game engine in a team of three using **C++**, **OpenGL**, and **QT**. Implemented multithreaded procedural terrain generation, flood fill lighting, biome-dependent vegetation, and a dimensional travel system

## LEADERSHIP

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### PENN SIGGRAPH

Nov 2022-Present

Internal Vice President, *prev* Project Lead, Speaker

- Working with current president to organize and advertise weekly social events and quarterly networking events for the game and animation industry
- Taught 2-hr masterclass teaching 15+ club members creature concepting and sculpting in **Blender**

## SKILLS

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**Languages:** C, C++, JavaScript, Java, Python, HTML and CSS, SQL, GLSL

**Frameworks and Tools:** React, Django, Tailwind CSS, QT, OpenGL, Git, Unit Testing

**3D and Game Technologies:** Maya, Blender, ZBrush, Substance Painter, Houdini, Unity, Unreal, Wonderland