# Eli Asimow

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## EDUCATION

**University of Pennsylvania** May 2026
*MSE, Computer Graphics and Game Technology*

**New York University** May 2021
*BS, Computer Science, with a Minor in Game Design*

## SKILLS

**Languages:** C++, GLSL, C#, Java, JavaScript, Lua, MEL, Python
**Tools & Frameworks:** Vulkan, DX12, OpenGL, Cuda, WebGPU, Unity, Unreal Engine, Maya, Houdini

## SELECTED PROJECTS

**Cumulus: Real-Time Interactive Volumetric Clouds** November 2025 - December 2025
*C++, DX12, Group Project* *GitHub Link*

- **AAA Visuals:** Implemented Nubis 3, Guerrilla Games' cloud technology from the Horizon series, with near photorealistic results.
- **Novel Enhancements:** Extended Guerilla's work with new creation and destruction frameworks. Clouds are procedurally generated via pre-baked noise texture samples. They then disperse when colliding with their environment, determined by the convex hull algorithm.

**CUDA Animation Path Tracer** September 2025 - October 2025
*C++, CUDA, Solo Project* *GitHub Link*

- **Pixel Light Rays:** Parallelized the scene lighting process with CUDA, computing intersections for tens of thousands of rays simultaneously against diffuse, specular, emissive, and refractive surfaces.
- **GLTF Animations, Skinning and Binding:** Utilized the Tiny-GLTF library to import GLTF scenes as input parameters. Wrote interpolator to match vertices to bone motion with linear blend skinning at each frame.
- **Bounding Volume Hierarchies:** Optimized mesh intersection tests with a BVH binary tree of bounding boxes. This enabled renders of advanced, high-polygon scenes, improving performance exponentially, up to a measured 350%.

## PROFESSIONAL EXPERIENCE

**Teaching Assistant** Jan 2025 – Present
*Teaching Assistant* *University of Pennsylvania*

- **5600, Interactive Computer Graphics:** Supported students' learning of graphic fundamentals. Collaborated with the class instructor and fellow teaching assistants to write midterms, grade projects, and tutor students.
- **5680 Game Design Practicum:** Nurtured students' designing brains through game jam assignments and feedback sessions. Built introductory Unreal and Unity assignment frameworks for new students.

**Veeva Systems** June 2021 – June 2024
*Software Engineer* *Pleasanton, California*

- **Back End Programmer:** Led development of Veeva's clinical trial study startup application, delivering quarterly features over three years to streamline the process for new pharmaceuticals.
- **Mentor:** Mentored three new associate software developers. Familiarized them with professional coding environments, led daily check-in meetings, and taught clean programming principles.

**Baobab Studios** May 2019 - August 2020
*Unity Software Engineer Intern* *Redwood City, California*

- **Player Choice Rollback Tool:** Constructed a cut scene playback tool for navigating player choices. This tool became a staple of Baobab's workflow, substantially streamlining the studio's process for QA and critique work on the *Baba Yaga* project.
- **Emmy Winning:** Credited for engineering work when *Baba Yaga* was recognized at the 2021 Daytime Emmy Awards as the winner of the *Outstanding Interactive Media* category.