Kevin Du

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EDUCATION

University of Pennsylvania, School of Engineering and Applied Science, Philadelphia, PA   May 2027
B.S.E, DMD Computer Science and Computational Graphics Program
M.S.E, Computer Graphics and Game Technology
Cumulative GPA: 4.0

RELEVANT COURSEWORK

Programming Languages and Techniques, Data Structures and Algorithms, Machine Perception, Interactive Computer Graphics, Path Tracing and Physically Based Rendering, Procedural Computer Graphics & Design Systems, Computer Animation

EXPERIENCE

Penn Medicine, University of Pennsylvania Health System   May 2025 - August 2025
Virtual Reality Software Engineering Intern   *Philadelphia, PA*
  • Developed a Virtual Reality Surgical Airway Training Simulator with Unity Engine to be run on Oculus Quest headsets as part of a small team
  • Collaborated with surgical residents to create accurate replications of surgical procedure steps and ensure user-friendliness

UPenn Game Research and Development Environment   Sep 2023 - Present
Game Design & Project Lead   *Philadelphia, PA*
  • Managed a team of 20+ people as the lead of the main 2024-2025 project published on Steam and Itch.io, responsible for implementing AI behavior systems and HLSL visual effects shaders as lead programmer
  • Oversaw multiple teams in the design and development of PennBoy, a minigame collection project to be published on Steam

Engineering Summer Academy at Penn   June - July 2024 & 2025
Residential Teaching Assistant   *Philadelphia, PA*
  • Taught 3D design and figure modeling techniques, providing hands-on assistance to a class of high school students
  • Planned and budgeted events and recreational activities

PROJECTS

Mini Minecraft
C++, OpenGL, QT Creator
  • Developed a 3D voxel game engine as part of a team of three, added to course's Hall of Fame for technical creativity
  • Implemented procedural asset generation/placement, procedural landscape textures, post-processing shaders, FBM water displacement shaders, and player movement/physics

3D Deferred Rendering Engine
C++, OpenGL
  • Developed a real-time physically-based rendering engine with OpenGL to render photo-realistic images
  • Utilizes PBR models, precomputed HDR image-based environment lighting, as well as post-process screen space reflection

Game Development Projects
C#, C++, HLSL, Blender, Unity, Unreal Engine 5, Godot
  • Led the development of **Catanks**, the 2024-2025 UPGRADE top-down arcade tank shooter; worked on game design planning, enemy AI behavior and pathfinding systems programming, VFX shaders, game asset pipeline coordination
  • Developed **Big Boat Battle**, a top-down combat game with interactive volumetric fog and water ripple shaders

SKILLS

Languages: C++, C#, GLSL, HLSL, Java, Python, JavaScript, TypeScript, Swift, HTML/CSS
Frameworks and Tools: Unity, Unreal Engine 5, Houdini, Git, IntelliJ, QT Creator, Eclipse, OpenGL, Node.js, Maya, Jira