Iciar Andreu Angulo

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Skills

- **Programming**: C++, Python, Java, OpenGL, GLSL, MEL, C#, Qt, PyQt, JSON, FFmpeg
- **Software**: Maya, Houdini, Unreal Engine, Unity, Git, Github Copilot, Claude Code
- **Core Competencies**: 3D Math, Linear Algebra, Mesh Topology, Geometry Processing, Tool Development, Deformation & Rigging Mechanics, Geometry Processing, Interpolation & Animation Transfer
- **Foreign Languages**: Spanish

Summary

Software engineer with a focus in computer graphics with 5+ years of experience in the Cinematics team at Blizzard Entertainment, helping deliver pre-render and in-game cinematics for multiple AAA games. With a proven ability to develop performant tools to help artists in a variety of areas such as modeling, rigging, animation, and layout. Eager to leverage strong mathematical fundamentals and graphics programming skills to deliver high-quality visual experiences.

Education

University of Pennsylvania

MSE, Computer Graphics & Game Technology

University of Maryland

BS, Computer Science

Work Experience

Software Engineer — Cinematics R&D Tech Team

Blizzard Entertainment (August 2020–Present)

- Developed and supported robust production pipeline tools in C++ and Python for modeling, rigging, and animation departments, directly supporting artists in creating high-fidelity assets.
- Architected and developed a multi-mesh intersection tool using C++ and Embree BVH, achieving a significant performance boost. Included a GPU rasterization (OpenGL) approach for handling UV intersections in 2D space.
- Acted as a bridge between engineering and art departments by gathering technical requirements, prototyping new solutions, and resolving workflow bottlenecks for multiple shows.
- Designed, owned, and optimized the pipeline application used to transfer animations between humanoid characters. Integrated Maya's Human IK system to map data from source rigs or motion capture FBX files to target assets, automating t-posing, baking, and prop attachments.
- Built a custom Maya command in C++ to transfer deformer weights across disparate mesh topologies. Integrated Embree's BVH algorithms to efficiently find closest vertices for barycentric calculations. Supplemented with a custom PyQt user interface to facilitate artist use.
- Engineered an automated pipeline tool to prepare high-density geometry for surfacing and texture painting. The tool utilizes Catmull-Clark subdivision (OpenSubdiv), applies Ptex map displacement, and uses Houdini's polyReduce for UV-preserving polygon decimation.

Research Assistant

University of Maryland Institute for Advanced Computer Science (August 2017 – July 2018)

- Learned Unity UI to develop a simple, user-friendly editing software for high resolution 360 videos
- Applied my knowledge of C++, and film production to create successful virtual reality experiences using the Insta360 Pro and the Samsung Gear 360, which I presented to the University System of Maryland Board of Regents and to state legislators.

Web Development Intern

NBC Sports Group (June 2017 – August 2017)

- Quickly and efficiently took on the different assignments provided, including setting my environment, researching XML formats, inspecting the websites for issues, and creating automated tests for the Drupal site.
- Learned Behat in order to create tests for the different NBC Sports websites.