

Jonathan Lee

Software & Graphics Engineer

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www.JonLee.xyz

EDUCATION

University of Pennsylvania • May 2018 (expected)
MS Engineering, Computer Graphics and Game Technology

Courses: Computer Animation, Advanced Rendering, GPU Programming, Game Design, 3D Modeling, Physically-Based Animation

Rutgers University • January 2016
BS, Computer Science • Dean's List

Courses: Computer Architecture, Algorithms, Databases, Operating Systems, Distributed Systems

SKILLS

Programming Languages C++, Python, Java, JavaScript, HTML/CSS
Software Maya, Unity, Unreal, Photoshop, Illustrator, After Effects, Premiere, Qt, Visual Studio

WORK EXPERIENCE

University of Pennsylvania • Philadelphia, PA
App Developer • January 2018 – Present

- Develop applications and games with the Unity Engine and C#.
- Currently creating an augmented reality game with Vuforia a university event themed around artificial intelligence.

The Walt Disney Company • Orlando, FL
Disney College Program Cast Member • January 2016 – July 2016

- Recognized by management and coworkers for exceptional performances.
- Integrated and implemented leadership and management skills from a course in Disney Leadership

Today's Business • Today's Business

Digital Developer Intern • May 2015 – August 2015

- Collaborated with the graphic design team to develop content and landing pages for websites.
- Maintained client webpages through WordPress (HTML/CSS, JavaScript, PHP).
- Ensured client search visibility and utilized Google Analytics to generate SEO reports.

PROJECTS *(complete portfolio with demos, videos, and artwork available at www.JonLee.xyz)*

Monte Carlo Path Tracer • C++

- Physically-based renderer that renders 3D scenes defined by a JSON file.
- Supports Multiple Importance Sampling, Global Illumination, and Volumetric Rendering.
- Optimized render times using a BVH acceleration structure and multithreading.
- Handles various materials including Fresnel Reflectance and Microfacet Models.

Real-Time Physically-Based Volumetric Renderer • WebGL 2.0, JavaScript • Demo: www.JonLee.xyz/Heatstroke

- Renders a 3D scene with physically accurate fog and smoke in real-time.
- Developed a pipeline that includes shadow mapping, deferred shading, volumetric rendering, and tone mapping to render physically based fog/smoke. Supports both homogenous and heterogeneous media.
- Based on EA's Frostbite render engine presented at Siggraph 2015 by Sebastien Hillaire.

Stay Woke: Goldilocks's Escape (VR) • C#, Unity

- VR game in which the player takes on the role as Goldilocks to escape without getting caught by the bear.
- Lead Unity programmer - level design, NPC AI and animation controller, VR development.

RU Studying • Python, HTML/CSS

- Fetches data from the Rutgers University API to help students find empty classrooms during school hours to study in.

Short Films

Playing by the Book • 2015 • www.JonLee.xyz/PlayingByTheBook

- Director, Writer, Animator
- New Lens Film Festival 2015

Deleted • 2013 • www.JonLee.xyz/Deleted

- Director, Writer, VFX Artist