

Jonathan Lee

Software Engineer and Graphics Programmer

<http://www.jonlee.xyz/>

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Skills

Languages	C++, Python, JavaScript, GLSL, WebGL
Web Technologies	HTML/CSS, Bootstrap, WordPress, Flask, Node.js, MongoDB, MySQL, Git
Software	Microsoft Word, PowerPoint, Excel Adobe Photoshop, Illustrator, Premiere, After Effects Autodesk Maya
Miscellaneous	Cantonese Chinese (Fluent) Guest service, cash handling, problem solving, troubleshooting

Education

University of Pennsylvania	Philadelphia, PA
MSE, Computer Graphics & Game Technology	August 2016 – May 2018 (anticipated)
Rutgers University	New Brunswick, NJ
BS, Computer Science	August 2012 – January 2016

Work Experience

Disney College Program Cast Member	Walt Disney World Resort
<ul style="list-style-type: none">Delivered excellent guest experience daily.Recognized by leaders for demonstrating the Four Keys on various occasions.Completed a course in Disney Leadership	Orlando, FL January 2016 – July 2016
Digital Developer Intern	Today's Business
<ul style="list-style-type: none">Maintained various web pages for clients through WordPress.Designed landing pages through Instapage and FalconSocial.Utilized Google Analytics to generate SEO reports.	Pine Brook, NJ May 2015 – Aug. 2015

Projects

Monte Carlo Path Tracer	Desktop Application
<ul style="list-style-type: none">Integration techniques: direct lighting, Full Lighting (MIS & Global Illumination), Full Lighting with Participating MediaVarious BSDFs and lights.Features BVH Acceleration, Implicit Geometry, Constructive Solid Geometry, Variance detection and reduction via super-sampling.	C++
Mini-Minecraft	Desktop Application
<ul style="list-style-type: none">Developed physics engine along with terrain interaction.Implemented first person and third person sandbox camera modes.Implemented various steering behaviors for NPC AI and coordinated a dance animation.	C++, GLSL

Mini-Maya

- Implemented a half-edge data structure.
- Parses OBJ and JSON files to render objects and their respective skeletons.
- Subdivides surfaces using Catmull-Clark Subdivision.
- Created a joint weight editor so users can adjust how much influence a joint has on the mesh.

Desktop Application

C++, GLSL

SteerLite Crowd Simulator

- Group project that Implemented various algorithms including A*, GJK collision detection, and Social Forces.
- Focused mainly on efficiency and collision detection.
- Extended GJK to detect concave polygons.
- Achieved excellent benchmarks on multiple test cases.

Desktop Application

C++

Walt Disney World Trip Planner

- Allows guests to plan their day at the resort.
- Displays attraction wait times and current weather conditions.
- Utilizes the following APIs: ThemeParks and TouringPlans

Web Application

HTML, CSS, JavaScript
(Node.js and Express),
MongoDB

RU Studying

- Helps students find empty classrooms, in real time, during school hours to study in.
- Students can select their campus and building of choice to find available classrooms.
- Utilizes the Rutgers University API for schedule of classes.

Web Application

HTML, CSS, Python/Flask

Gradebook

- RESTful application that uses POST, GET, DELETE, and UPDATE functions.
- Computes student averages.
- Uses a JSON file as its database and gets modified based on the user's query.

Web Application

HTML, CSS, Go

Special Permission Number Request System

- Group project for a Databases course at Rutgers University.
- Students can register for a ticket (SPN) for courses that are full.
- Professors can check student credentials and grant access to the course.
- Focused mainly on developing the backend to connect the frontend with the database and designing the UI.

Web Application

HTML, CSS, Java, MySQL