

# JONATHAN LEE

Programmer — Filmmaker

University of Pennsylvania  
Philadelphia, PA

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## EDUCATION

**University of Pennsylvania** (Philadelphia, PA)  
*MSE Computer Graphics and Game Technology*  
August 2016 — May 2018 (anticipated)

- Penn SIGGRAPH Member
- Previous Courses: Intro to Computer Graphics, Computer Animation, 3D Modelling
- Dean's List (Fall 2012, Fall 2014, Spring 2015, Fall 2015)
- National Society of Collegiate Scholars, Undergraduate Society of Computer Scientists, Rutgers Animation Club, Intramural Basketball Captain (2012-2015)

**Rutgers University** (New Brunswick, NJ)  
*BS Computer Science*  
August 2012 — January 2016

## SKILLS

**Programming Languages** C++, Python, Java

**Design Software** Maya, Photoshop, Illustrator, Premiere, After Effects

**Web Technologies** HTML/CSS, Flask, JSP, MySQL, WordPress

**Interests**

**Current Courses**

- Animation
- Film/VFX/Photography
- Graphic Design
- Physically Based Animation
- Advanced Topics in Computer Graphics

## RECENT PROJECTS

**Mini-Minecraft - C++**

- Implemented physics and terrain interaction (gravity, collision detection/interaction, raymarching for creating/destroying blocks)
- Allows first person, third person, and sandbox camera modes
- Implemented steering behaviors and animated a dance sequence for NPC cows and birds

**Mini Maya - C++**

- Parses OBJ files and draws onto the screen utilizing a half-edge mesh data structure
- Successfully subdivides meshes through Catmull-Clark subdivision
- Parses JSON files to allow rigging and skinning of skeletons onto the mesh
- Allows users to change weight influence on different joints

**SteerLite Crowd Simulator - C++**

- Fully functional crowd simulator that implemented A\*, Social Forces, and GJK Collision Detection.
- Implemented concave polygon collision detection through
- Successfully achieved low scoring benchmarks on about 15 test cases

**RU Studying — Python**

- Finds empty classrooms during school hours for students to study in
- Parses JSON data provided by the Rutgers API

## WORK EXPERIENCE

**Walt Disney World Resort —**  
*Quick Service Food & Beverage Cast Member*  
*Disney College Program Participant*  
January 2016 — July 2016 (Orlando, FL)

- Performed excellent service and interaction to guests daily
- Maintained a well-stocked and “show” ready location
- Worked in a multifaceted team that served thousands of guests each day
- Successfully completed a course in Disney Leadership
- Demonstrated the Four Keys on multiple occasions

**Today's Business —**  
*Digital Developer Intern*  
May 2015 — August 2015 (Pine Brook, NJ)

- Maintained various web pages for different clients with WordPress
- Designed landing and Facebook pages for clients with Instapage and FalconSocial
- Generated SEO reports with Google Analytics