

Julia Read

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Objective: An engineering opportunity at the intersection of technology and art, using computer graphics, math, and physics to bring concepts and stories to life.

Education

Harvey Mudd College, Claremont, CA
B.S., Computer Science, *expected 05.2020*
Second Major: Art (concentration: Digital Art)

Coursework and Projects

Relevant Coursework

- Computer Graphics
- Object Oriented Game Development
- Advanced Algorithms
- Artificial Intelligence
- Advanced Digital Art

Projects

Raytracer, team project (C++), *05.2019*

- Matte and reflective material
- Ambient, point, and directional light
- Flat/smooth shading and anti-aliasing
- Accelerated with K-D tree and multithreading
- Rendered 650,000+ polygon, configurable chess scene in about 20 seconds
- More info at team-raytracer.github.io

Flight Simulator, team project (WebGL), *04.2019*

- Infinitely generated terrain with height based on Perlin noise, colored with 2 different kinds of shading based on height
- User-controllable pitch, yaw, roll, and speed
- Perspective and orthogonal viewing

Flex Tracker, team project, *09.2018 – 12.2018*

Created Django webapp to track finances and optimize spending with dynamic programming approach to knapsack problem.

Skills

Coding

- C++, C
- Python
- Java
- OpenGL
- WebGL
- GLSL
- SDL
- Git
- Perforce
- HTML
- CSS
- JavaScript
- React

Tools

- Illustrator
- Photoshop
- Premiere
- After Effects
- Cinema 4D
- Blender
- Maya

Work Experience

Software Engineering Intern, *05.2019 – 08.2019*
DICE LA (Electronic Arts), Los Angeles, CA

- Displayed conditional overlays using stencils and depth within shaders and render passes.
- Redesigned ability hierarchy in system refactor, networking across client and server.
- Implemented UI features from artist requests.
- Scripted object creation tool for Maya artists.
- Performed efficient bug fixes in finalling mode.
- Contributed gameplay feedback from playtests.

Software Engineering Intern, *05.2018 – 08.2018*
HomeAway (VRBO), Austin, TX

Increased load performance by about 300% through a front-end, proof-of-concept project on JAMstack PWAs.

Tutor and Grader, *08.2017 – 05.2019*
Harvey Mudd College, Claremont, CA

- Computer Systems (*Fall 2018, Spring 2019*)
- Data Structures (*Spring 2018*)
- Biology and Computer Science (*Fall 2017*)

Graphic Designer, *08.2018 – 12.2018*
The Student Life, Claremont, CA

Worked with editors to contribute weekly visuals for the Claremont Consortium newspaper.

Extracurricular Activities

Hackathons

InternHackATX (PlanAway: *2nd Place*), *07.2018*

- Created natural language processing chatbot to assist with group travel plans.

Hacktech (Secret Agent Descent), *03.2018*

- Created a webapp for facilitating the game Spyfall.

Puzzle Hunts

- Google Games (*3rd Place*), *05.2019*
(*3rd Place*), *05.2018*
- Bloomberg Puzzle Hunt (*2nd Place*), *02.2018*
- Facebook Puzzle Hunt (*2nd Place*), *01.2018*