Sarah Forcier

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EDUCATION

UNIVERSITY OF PENNSYLVANIA
MSE in Computer Graphics and Game Technology
Expected Dec 2017 | Philadelphia, PA
GPA: 3.84

CORNELL UNIVERSITY
Bachelor of Arts
May 2016 | Ithaca, NY
GPA: 4.14

LUDWIG MAXIMILIAN UNIVERSITY
Spring 2015 | Munich, Germany

SKILLS

PROGRAMMING
- C++
- Java
- C
- Python
- OCaml
- Javascript/HTML/CSS
- GLSL

SOFTWARE
- Maya & MEL
- Houdini
- After Effects
- Git
- Mathematica

LANGUAGES
- German
- French

COURSEWORK
- Computer Animation
- Advanced Computer Graphics
- Procedural Graphics
- Game Design - current
- GPU Programming - current
- 16mm and Digital Filmmaking

HOBBIES
Ice Hockey, Scuba Diving, Bartending, Windsurfing, Snowboarding

EXPERIENCE

DREAMWORKS ANIMATION
RENDERING Research & Development
May 2017 - August 2017 | Glendale, CA
- Implemented additional features to a denoising application: multiple compression options, denoising respects alpha channel, and denoising multiple frames.
- Reduced box filtering time by half with an algorithm only dependent on image resolution.

CORNELL UNIVERSITY
TEACHING ASSISTANT Object-Oriented Programming
January 2016 - May 2016 | Ithaca, NY
- Led discussion section, held office hours, graded projects and exams for a course of 700 students among 25 TAs

PROJECTS

January 2017 - May 2017
MONTE CARLO PATH TRACER C++, Qt
- Programmed a CPU-based path tracer with multiple importance sampling and a volumetric integrator
- Handled materials with Fresnel reflectance and microfaceted surfaces
- Achieved speedup from a multi-thread design and a BVH acceleration structure

BIO CROWDS Javascript, WebGL, THREE.js
- Developed a real time crowd simulation with obstacles using a space colonization algorithm
- Simulated over 200 agents and obstacles at 32 fps

REAL TIME IMPLICIT SURFACES Javascript, WebGL, THREE.js
- Implemented a real time metaballs and isosurface using marching cubes algorithm
- Constructed 7 metaballs with 1800 tris running at 28 fps

INTERACTIVE SHAPE GRAMMAR Javascript, WebGL, THREE.js
- Built a procedural town and terrain modeled with multi-octave perlin noise function
- Designed a shape grammar with 12 subdivision rules and 10 variables

AWARDS
- Eckert Fellow; 2016
- Cum Laude; 2016
- Merrill Presidential Scholar (top 1% of class); 2015
- DAAD Research in Science and Engineering scholarship; 2014
- Rawlings Cornell Presidential Research Scholar, 2012