Peter Mocarski

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Education

Cornell University — *Ithaca, NY*

Master of Engineering, Computer Science — *2017 - May 2018*

Cornell University — *Ithaca, NY*

Bachelor of Science, Computer Science — *2014-2017*

- GPA: 4.0

Experience

Optiver — *Chicago, IL*

Software Developer, Intern — *Summer 2017*

- Part of the Automated Trading Systems team, responsible for developing low-latency, high frequency trading systems
- Parallelized an end-to-end testing framework to increase performance while ensuring safe concurrent execution of processes
- Worked in Python and C++

Intentional Software (acquired by Microsoft) — *Bellevue, WA*

Software Developer, Intern — *Summer 2016*

- Part of the Layout and UI Assets team
- Implemented and demoed an integrated date picker tool in C# with multi-dimensional animations, gesture recognition, and customizable visual themes
- Heavy focus on layout optimization, with integration of lazy evaluation and tree-based caching

Department of Computer Science, Cornell University — *Ithaca, NY*

Teaching Assistant (CS 4820: Algorithms, CS4320: Databases, and ECE2300: Computer Organization) — *2015 - Present*

- Lead lab sessions and office hours
- Administer exams and grade student submissions

Projects

PRAC-MAN 3D — *Cumulative Course Project*

Co-Creator (4 Person Team) — *Spring 2017*

- Web-based 3D implementation of PAC-MAN themed as a fast-paced horror game
- Implemented in WebGL and JavaScript

Ray-Tracing Image Renderer — *Cumulative Course Project*

Co-Creator (2 Person Team) — *Spring 2017*

- Simulates the way photons propagate through space, aiming to produce photorealistic computer-generated images
- Renders shadows, optical effects, textures, multiple shading models, and surface materials such as glass and metal
- Implemented in Java

ConsTableaux — *Featured at BOOM 2017*

Co-Creator (3 Person Team) — *Fall 2016*

- Automated theorem prover and interactive proof visualizer based off of the method of analytic tableaux for propositional logic
- Implemented in Scala and JavaScript (D3.js)

Pokémon Pebble Edition — *Winner at RIT Brick Hackathon 2015*

Co-Creator (3 Person Team) — *Spring 2015*

- Mobile, location-based version of Pokémon integrated with the Pebble smart watch
- Implemented in Java and JavaScript

Skills

Languages & Technologies	Java, C#, C, OCaml, Python, WebGL, JavaScript, Verilog HDL, ARM Assembly, LaTeX, Git
Practical	Graphics, Artificial Intelligence, Natural Language Processing, Machine Learning, Databases
Theoretical	Algorithms, Cryptography, Functional Programming, Applied Logic, Networks II
Hardware-Oriented	Operating Systems, Embedded Systems, Digital Logic and Computer Organization