

# Peter Mocarski

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## Education

### Cornell University

MASTER OF ENGINEERING, COMPUTER SCIENCE

*Ithaca, NY*

*2017 - May 2018*

### Cornell University

BACHELOR OF SCIENCE, COMPUTER SCIENCE

*Ithaca, NY*

*2014-2017*

- GPA: 4.0

## Experience

### Optiver

INCOMING SOFTWARE DEVELOPER, INTERN

*Chicago, IL*

*Summer 2017*

- Part of the Automated Trading Systems team, responsible for developing low-latency, high frequency trading systems

### Intentional Software (acquired by Microsoft)

SOFTWARE DEVELOPER, INTERN

*Bellevue, WA*

*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

TEACHING ASSISTANT (CS 4820: ALGORITHMS, CS4320: DATABASES, AND ECE2300: COMPUTER ORGANIZATION)

*Ithaca, NY*

*2015 - Present*

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

## Projects

### PRAC-MAN 3D

CO-CREATOR (4 PERSON TEAM)

*Side Development*

*Spring 2017*

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

### Ray-Tracing Image Renderer

CO-CREATOR (2 PERSON TEAM)

*Cumulative Course Project*

*Spring 2017*

- Simulates the way photons propagate through space, aiming to produce photorealistic computer-generated images
- Supports 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)

*Side Development*

*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 BrickHack 2015)

CO-CREATOR (3 PERSON TEAM)

*RIT Brick Hackathon*

*Spring 2015*

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

## Skills

### Languages & Technologies

#### Practical

#### Theoretical

#### Hardware-Oriented

Java, C#, C, OCaml, WebGL, SQL, Verilog HDL, ARM Assembly, JavaScript, LaTeX, Git  
Graphics, Artificial Intelligence, Natural Language Processing, Machine Learning, Databases  
Algorithms, Cryptography, Functional Programming, Applied Logic, Networks II  
Operating Systems, Embedded Systems, Digital Logic and Computer Organization