Joshua Storm Becker

(301) 712-6134

Education

Princeton, NJ Princeton University Fall 2015 – May 2019

Bachelor of Science in Engineering - Computer Science

• Overall GPA: 3.59 of 4.0 | Departmental GPA: 3.71 of 4.0

Selected Coursework:

• Operating Systems, Networks, Data Structures & Algorithms, Neural Networks Applications & Theory

Employment

Software Development Intern

Optiver

Summer 2017, Summer 2018

Automated Trading Systems | C++, Java | https://www.optiver.com/

- Implemented and coordinated firmwide protocol upgrades for sending orders to stock and options exchanges.
- Developed functionality within firm's inhouse simulated trading environment to seamlessly switch between real market and generated data sources for simulated trading courses used to onboard new traders.

Research Assistant

Snyderphonics

2016 - 2018 Academic Years

Electronic Instrument Design & Development | C, JavaScript | http://www.snyderphonics.com/

- Developed firmware for electronic instrument control interface.
- Refactored web art installations for asynchronous loading, dropping page preload times from over a minute to seconds.

Software Development Intern

Analytical Graphics Inc.

Summer 2016

glTF Pipeline | JavaScript, Node.js | https://www.npmjs.com/package/gltf-pipeline/

- Implemented 3D-model cache optimization stage, increasing frame rates by up to 100% in vertex-bound cases.
- Created command-line interface for client-end use of the 3D model optimization pipeline.
- Implemented pipeline stage to generate normals for input models that lacked proper vertex normals.

STEM Intern

National Security Agency

Summer 2015

• Implemented cryptographic methods in Cryptol (Haskell based DSL) for formal verification.

Selected Projects

uPdo

https://rmw2.github.io/uPdo/

Spring 2018

- A web interface and Web Audio implementation of the visual programming language Pure Data.
- Included refactoring an abandoned project to implement the Pure Data backend in JavaScript.
- Stack: JavaScript, React | Source: https://github.com/rmw2/uPdo

Meetable

http://becker.codes/meetable/

Spring 2017

- A web application to simplify scheduling meetings.
- Integrates with users' Google Calendars to streamline time selection to only when users are available.
- Stack: Node.js, MongoDB, Bootstrap | Source: https://github.com/JoshuaStorm/meetable

WebSynth

http://becker.codes/WebSynth/

Summer 2016

- A dynamic subtractive synthesizer built into a single webpage.
- Stack: JavaScript, p5.js | Source: https://github.com/JoshuaStorm/WebSynth

Skills

- Most experienced with Java, C, and JavaScript.
- Some experience with C++, Python, Cryptol, and Swift.
- Proficient with Git version control.