

# Kyle Spencer

State College, Pennsylvania, United States

kylecspencer@gmail.com — www.kylespencer.me — 412-759-1172 — github.com/kylecs

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## Education

### The Pennsylvania State University

- BS in Computer Science, Spring 2019 (Expected)
  - Minor in Mathematics
  - 3.71 GPA, 3.97 Major GPA
  - Dean's List Multiple Semesters
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## Experience

### Penn State Beaver, *Computer Science Tutor* (September 2016 - December 2016)

- Taught fundamentals of computer science and C++ to students.
- Assisted students with projects and assignments.

### Penn State Beaver Library (May 2016 - August 2016)

Built a dynamic catalog website showing all DVDs available for borrow, providing an interface for browsing, searching, sorting, and adding DVDs.

- Used Node.js with Express and Postgres to implement the backend of the website which was deployed to OpenShift Cloud Hosting.
- Designed a single-page frontend with Angular.js and Bootstrap that asynchronously requested data from the backend server.
- Implemented a cache-based solution with node-cache to ensure fresh data for the primary pages always loaded quickly.

### Penn State Beaver Library (May 2015 - August 2015)

Created a dynamically generated and categorized showcase wordpress website for the science fiction books available at the Penn State libraries.

- Implemented a Java program with Selenium that downloaded relevant book identifiers from the Penn State Library website, then used the Goodreads API to acquire more book data.
  - Created program that formatted the book data into HTML book pages and category pages, then uploaded it to the wordpress website automatically using Selenium.
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### HTTP Server

- Implemented an HTTP/1.1 server in Rust, with support for serving static websites.

### Kernel

- Created a text-based x86 kernel with C and IA-32 Assembly.
- Implemented a terminal driver, a keyboard driver, a PCI driver, and a basic command interface.

## Projects

### NASA Image API Timelapse

- Wrote a script with Python to generate an overhead view timelapse GIF of anywhere on earth given the coordinates using NASA's Earth Image API and ImageMagick.

### Dynamic Forum Website

- Used Python with Flask to create a customizable forum website, with support for user accounts, posts, comments, and a dynamic subforum hierarchy.
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## Skills

**Proficient:** C++, Java

**Skilled:** JavaScript, Python, C, MIPS

**Concepts:** Full Stack Web Development, Relational Databases, SQL, REST APIs, Cloud Platforms, Object Oriented Programming, Concurrent Programming, Systems Programming

**Tools, Libraries:** Linux, Git, Angular.js, Node.js, Flask, Bootstrap