

Owen Q. Brooks

<http://owen-brooks.github.io>

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EDUCATION

- **Drexel University** Philadelphia, PA
Bachelor of Science in Computer Engineering; GPA: 3.5 Expected Graduation 2020
 - **Relevant Coursework:** Algorithms, Data Analysis, Networking, Business Statistics, Embedded Systems, Discrete Math, Calculus I, II, Multivariate, Linear Algebra, Differential Equations, Digital Logic

EXPERIENCE

- **Comcast** West Chester, PA
Data Engineering Co-op May 2018 - August 2018
 - **Workflow Dashboard:** Designed and built full-stack Spring-Boot application allowing users to monitor data-transfer workflows. Leveraged 3rd party Java API to safely interact with automation software.
 - **Dev-Ops REST-API:** Automated and simplified access to application database by creating a REST API using Spring-Boot and JPA. Researched and implemented continuous deployment using Jenkins and Cloud-Foundry. Leveraged Spring Rest Docs to auto-generate scalable API documentation.
 - **Metadata Search App:** Increased data accessibility and understanding by developing a full-stack metadata-search application. Reformatted Elasticsearch database in order to improve query time and application scalability.
 - **Data Ingestion Automation:** Automated data transfer into Hadoop database with shell scripting. Researched and automated the conversion of shell scripts and utilities to Python. Validated ingested data with Hive.
 - **Employee Training:** Gave presentations to fellow Comcast employees on topics including: REST APIs, JPA, application frameworks, Jenkins, continuous deployment.
- **G3 Technologies** Mt. Airy, MD
Software Engineering Co-op May 2017 - Sept 2017
 - **Test Software:** Increased radio production by troubleshooting and fixing bugs found in Python applications. Restructured application interface in order to create a safe, standard user experience.
 - **Embedded Development:** Eliminated the need for micro-controllers in product development by creating signal-processing algorithms. Implemented and tested created algorithms using FTDI cables.
 - **RF Tuning And Production:** Exceeded monthly quotas for radio component production. Utilized a variety of mechanical and software tools to test and tune complex receivers, tuners, and their various modules
- **Drexel NanoPhotonics Lab** Philadelphia, PA
Lab Assistant Sept 2017 - March 2018
 - **Stage Automation:** Increased research efficiency by creating MATLAB programs to control and automate the use of optical stages. Eliminated previously needed calibration methods in the production of new imaging filters
 - **Optics Research:** Collaborated with researchers in the creation and testing of optical imaging filters. Utilized Class 3 lasers to ensure functionality of H-PDLC samples. Effectively collected and presented research data.

PROJECTS

- **Aether-Search:** Satellite search application developed for Starlight. Sensor data collected and organized using Python
- **Craigslist-Car-Finder:** Flask web-scraping application built to search Craigslist car listings.
- **Owen-brooks.github.io:** Personal website and blog with articles on various programming topics. Built with Jekyll.
- **Drexel Design Project:** Robotics project using Lego hardware and Robot-C search algorithms. Competed and earned second place in object retrieval challenge.

SELECT SKILLS

- **Languages:** (proficient): Python, Java, SQL, Bash, MATLAB, HTML (familiar): C, JavaScript, R, C++, VHDL
- **Frameworks and Tools:** Git, Jenkins, Jira, Spring-Boot, Flask, Arduino, Hive, Oracle, MySQL, LabView, AutoCAD
- **Test Equipment:** Signal Generator, Network Analyzer, Spectrum Analyzer, Oscilloscope

EXTRACURRICULAR ACTIVITIES

- **Drexel Men's Wrestling:** Team member and starter on nationally ranked Division I wrestling team. (2016 - Present)
- **Beat The Streets Philadelphia:** Peer mentor, tutor and coach for Philadelphia youth. Striving to teach principles of academic and athletic discipline, through the sport of wrestling. (2017 - Present)