Owen Q. Brooks

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EDUCATION

Drexel University Philadelphia, PA
Bachelor of Science in Computer Engineering; GPA: 3.6 *Expected Graduation 2020*

- **Relevant Coursework**: Algorithims, Data Anlaysis, Adv. Programming, Business Statistics, Network Eng., Microcontrollers, Discrete Math, Calculus I, II, Multivariate, Linear Algebra, Differential Equations, Physics I, II

EXPERIENCE

Comcast Philadelphia, PA
Data Engineering Co-op *May 2018 - Present*

- **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. Created documentation used by teams trying to incorporate that API into other projects.
- **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 using Flask and ElasticSearch. Reformatted ElasticSearch database in order to improve query time and application scalability.
- **Employee Training**: Gave presentations and demos 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*

- **Embedded Development**: Eliminated the need for microcrontrollers in product development by creating signal-processing algorithms. Implemented and tested created algorithms using FTDI cables.
- **Test Software**: Increased radio production by troubleshooting and fixing bugs found in Python applications. Coordinated with hardware technicians and Lead Software Engineer to document bugs found in patches.
- **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**: Increase 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**: Collaborate with researchers in the creation and testing of optical imaging filters. Utilize Class 3 lasers to ensure functionality of H-PDLC samples. Effectively collect and present research data.

PROJECTS

- **Python Search Auto-Complete**: Scripts that allows incorporation of word and sentence completion in search engines. Learns common word patterns using Markovs Algorithim.
- **Craigslist Web Scraper**: Web application that allows users to search Craigslist car listings, nationwide. Leverages the BeautifulSoup library to determine URLs and scrape listing data.
- **Lego NZXT Robot**: Robotics project that uses Lego hardware and search algorithms to compete in object retrieval challenges. Received second place in 2016 Drexel Design Lab Challenge.

EXTRACURRICULAR ACTIVITES

- **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)*

SELECT SKILLS

- **Languages**: Python, SQL, C, MATLAB, R, Bash, Java, JavaScript, C++, VHDL, LaTeX, HTML, CSS
- **Frameworks and Tools**: Git, Jenkins, Jira, Spring-Boot, Flask, Play, Oracle, MySQL, LabView, AutoCAD
- **Test Equitment**: Signal Generator, Network Analyzer, Spectrum Analyzer, Oscilloscope