MATTHEW BRUCKER

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EDUCATION

Olin College of Engineering | Needham, MA | GPA: 4.0 — May 2020
- Bachelor of Science in Engineering with Computing
  Relevant Coursework: Quantitative Engineering Analysis, Software Design, Data Science, Principles of Engineering, Complexity Science, Hacking the Library

EXPERIENCE

Workiva | Information Security Intern — Summer 2018
- Developed and deployed Python-based module for performant intake and formatting of logs from production environments
- Built and documented unit and integration-testing functionality of
- Wrote Splunk alerts/dashboards to automate alerting and notification of security incidents
- Made Python-based Splunk apps to query REST APIs and generate Splunk events

Dwolla | Information Security Intern — Summer 2016
- Tested and deployed open-source security tools for security testing/file integrity monitoring on Linux servers
- Wrote Python scripts to automate security testing/log processing internally and in AWS EC2 servers
- Created Python program to analyze network traffic security rules in AWS

Olin Robotics Lab | Edwin Robotics Group — Fall 2016
- Developed machine learning optical character recognition program to recognize handwritten characters using Python and OpenCV

PROJECTS

InfinityBoard | Hacking the Library Project | infinityboard.olin.build — Spring 2018
- Worked on three-person team to develop InfinityBoard, a real-time, collaborative virtual whiteboard
- Used JavaScript and React framework to build application frontend
- Created state management and real-time propagation using Redux

ABE (Olin Web Calendar) | Hacking the Library Project — Spring 2018
- Developed fixes and improvements in existing Python (Flask) based application backend
- Improved unit testing framework and provided performance improvements

Network Greedy Routing in Python | Complexity Science Project — Fall 2017
- Created agent-based models of network message transition in Python
- Replicated scientific paper findings on greedy routing in networks

Autonomous Driving Simulation | Software Design Project — Spring 2017
- Developed Python simulation of self-driving car that uses evolutionary algorithms to learn

Python-Based 3D Graphics Engine | Software Design Project — Spring 2017
- Designed and programmed interactive 3D graphics engine in Python, using NumPy to calculate and accurately display objects in a 3D world

RESEARCH

Olin College:
Education Research — Spring 2017 - Present
- Conducted grounded theory analysis and coding of narrative interviews regarding perspectives about gender among engineers

Narrative Identity Research — Summer 2017
- Analyzed narratives for identity themes as part of collaborative study of aging in high-stress individuals

SKILLS

Programming	*Technology*	*Design*
Python (OpenCV, Flask, NumPy/SciPy), JavaScript (React/Redux, NodeJS), Java, C++, MATLAB	MongoDB, PostgreSQL, Amazon Web Services (Lambda/EC2), Docker, Splunk, Arduino, Raspberry Pi	Adobe Illustrator/inDesign, Autodesk Inventor, SolidWorks, OnShape