Tristan N. Koopman
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Education

University of Massachusetts Amherst — *magna cum laude*
Bachelor of Science in Electrical Engineering — **GPA: 3.81**
Commonwealth Honors College
Minor: Computer Science

Relevant Courses

Computer Systems Principles, Data Structures and Algorithms, Reasoning Under Uncertainty, Programming Methodology, Hardware Organization and Design, Computers Networks & Internet, Signal Processing

Skills

Python, C, Java, Scala, HTML, Git, UNIX command line, MATLAB, Assembly Code

Professional Experience

MITRE, Bedford, MA
Sensors Engineering Intern — Summer 2017

- Created electronic protection performance model for a multichannel radar system
- Worked independently using MATLAB to run SAR, GMTI, and EP simulations and algorithms
- Obtained required DoD security clearance
- Produced technical report detailing the derivation and design of EP performance model

UnitedHealth Group-Optum, Boston, MA
Software Development Intern — Summer 2016

- Created user interface to efficiently on-board new data sources to a big data platform
- Delivered functioning webpages using Java, HTML, CSS, Angular JS, and jQuery
- Collaborated with development team in Agile environment with daily scrum meetings
- Presented project progress updates biweekly to company executives via PowerPoint

Academic Projects

Honors Thesis: Pumped Hydro Energy Storage Modeling — 2017-2018

- Participated in interdisciplinary hydro power research group
- Programmed a renewable energy integration model for the New England electricity grid in Python
- Analyzed and reported on output data using data visualization tools and techniques

SmartDesk: Senior Design Project — 2017-2018

- Manufactured a touch screen desk using OpenCV, EndLighten Acrylic, IR light, and a LCD TV
- Collaborated with three senior ECE students
- Built professional product with near instantaneous response time (6 ms)

Circuit Doodler Program — Fall 2016

- Utilized machine learning and Python to create a program that detects circuit components drawn by user
- Implemented scikit-learn and trained an SVM with principle component analysis
- Achieved 95% accuracy

Other Experience

UMass Amherst Learning Resources Center
Tutor — Fall 2016

- Tutored students on material from university engineering and computer science courses

Wildwood Elementary School, Amherst, MA
Community Service — April 2016

- Interactively taught elementary school students about circuits through Chibitronics