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Matthew T. Elia

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Education

Northeastern University, Boston MA

Candidate for Bachelor of Science in Electrical and Computer Engineering

May 2018

Related Courses: Linear Systems, Electronics II, Electromagnetics, Eng. Algorithms, Digital Design and Computer Arch., Circuits and Signals

Honors/Awards: Northeastern University Honors Program, Dean's Scholarship

Activities: AIAA Drone Club, Northeastern Disputation Club, Intramural Flag Football **International Experience:** Rhetoric and Human Rights in the 20th Century, Central Europe

GPA: 3.22

Work Experience

Boston Engineering Corporation

Jan 2017 - Jun 2017

Electrical Engineering Co-op for Boston Engineering's Advanced System Group

Waltham, MA

Worked individually and collaboratively with the team to develop custom hardware for multiple projects

- -Worked with an interdisciplinary team to design, build, and test subsystems on an underwater robot
- -Was key part of an extended field test of an underwater robot to test functionality and mission success
- -Gained experience working on various government contracts
- -Used Altium to perform schematic capture and layout for multiple PCB designs
- -Designed, laid out, fabricated, and tested PWM to Analog Voltage Conversion PCB
- -Identified design bugs, reworked PCB and updated Altium design for new revision
- -Used Creo Schematics to produce detailed wiring schematics for the assembly of wiring harnesses

Emphysys Technology Solutions

Jan 2016 - Jun 2016

Woburn, MA

Electrical Engineering Co-op

Worked alongside Electrical Engineers on project management/ product design

- Consulting group that provides design solution for many medical, vacuum, and plasma applications
- Assisted in design process (using Altium and NL5) of RF generators
- Worked with LCL circuit design and performed RF tuning on generators
- Coordinated assembly of products to be sent directly to customers
- Managed customer projects while working closely with CEO and CFO

Philips Color Kinetics

Jan 2015 - Jun 2015

Burlington, MA

Electrical Engineering Co-op

Assistant to Electrical Engineering Team

- Manufactured prototype printed circuit board (PCB) designs with engineers and helped to test the functionality and efficiency of designs
- Utilized Altium to design PCB connector board for ongoing project
- Performed microscope soldering and other tasks which required technical skills in electronics repair and construction

Biomedical Optics Research Group

Sep 2014 - Apr 2015

Boston, MA

Undergraduate Lab Assistant

Assistant to PHD Candidate

- Researched use of lasers to examine different types of cells in the bloodstream of mice *in vivo* by measuring the fluorescence of different types of cells
- Designed and constructed power and sensor boxes to improve organization of the system
- Reorganized wire systems to improve neatness and dynamicity

Skills

Altium, NL5, C/C++ programming languages, OrCAD PSPICE, Linux OS, Verilog, MATLAB **Interests:** Space, Skiing, Hiking, Baseball, Travel