

# BLAKE ELLIS CAPELLA

1733 Dearbought Drive, Frederick, MD 21701  
capellb1@tcnj.edu | 240-405-9852  
blakecapella.com | linkedin.com/in/blake-capella/

## EDUCATION

---

### THE COLLEGE OF NEW JERSEY (TCNJ)

*Bachelor of Science in Electrical Engineering*  
*Minor in Physics*

EWING, NJ  
May 2020

- **GPA:** 3.91/4.00
- **Honors/Affiliations:** Tau Beta Pi Scholar, Armstrong Scholar, Seven-time Dean's List, Institute of Electrical and Electronics Engineers, Phi Kappa Phi

### UNIVERSITY OF NEWCASTLE

*Bachelor of Science in Electrical Engineering*

NEWCASTLE, NSW, AUSTRALIA  
February 2019 - July 2019

**Select Coursework:** Senior Project I, Senior Project II, Systems Engineering

## SKILLS

---

#### **Technical Expertise**

Advanced Control Theory      Digital/Mixed Signal Design  
System Modeling and Analysis      Electromagnetism  
Analog Circuit Design

#### **Development Tools**

Spice, MATLAB, LabVIEW,  
EAGLE, Python, Verilog HDL,  
C/C++

## PROJECT EXPERIENCE

---

### SENIOR CAPSTONE: THERMAL JOINT THERAPY

*Electrical Engineer, Webmaster*

EWING, NJ  
August 2019 – May 2020

- Developed a mixed signal embedded controller for high power and inductive loads for a novel therapeutic device. Analyzed and modeled a system from first principle equations to create an advanced embedded process control scheme and embedded digital logic controller.

### CARNEGIE MELLON UNIVERSITY

*Human Computer Interaction Institute REU Student*

PITTSBURGH, PA  
May 2018 – August 2018

- Spearheaded small team project investigating the potential benefits of machine learning classifiers on full-body exercise classification and computer vision. Produced a unique dataset, adapted machine learning models and applied advanced statistical and experimental analysis techniques while collaborating closely with faculty and graduate students.

## WORK EXPERIENCE

---

### THE BONNER INSTITUTE FOR CIVIC AND COMMUNITY ENGAGEMENT

*Environment Team Intern*

EWING, NJ  
August 2019 – Present

- Conducted a systematic literature review of the environmental impact of agriculture which will be presented at Rutgers's 25<sup>th</sup> annual Public Health Symposium. Appointed as one of four founding members of the Bonner Leadership Team to represent the program's 100 students and direct program policy.

*Bonner Community Scholar, AmeriCorps Member*

August 2016 – July 2019

- During the semester, spent over ten hours a week in a diverse leadership development program working closely with local social and civic nonprofits on capacity building while simultaneously facilitating eight-hour workshops for over 200 first-year students.