

## ALVI TOPUZI

Email: [alvi\\_topuzi@outlook.com](mailto:alvi_topuzi@outlook.com)

Phone: (864) 626-8557

LinkedIn: [www.linkedin.com/in/alvi-topuzi](https://www.linkedin.com/in/alvi-topuzi)

## EDUCATION

Overall GPA: 3.198

**Clemson University, Clemson, SC**

Aug 2023 – present

Bachelor of Science in Electrical Engineering

**Greenville Technical College, Greenville, SC**

Aug 2021 – Aug 2023

Associate in Science Degree- Electrical Engineering Transfer

Dean's List Summer 2022

## TECHNICAL SKILLS

**Computer:** AutoCAD 2D & 3D, Inventor 3D Modelling, KiCad PCB Design C programming, MATLAB, assembly coding, embedded programming, Microsoft Excel

**Languages:** English (fluent), Albanian (native), Spanish (proficient), Italian (beginner)

## PROJECTS

- **Microcontroller Interfacing:**
  - Used a PIC32MX microcontroller to operate a piezo buzzer and generate a desired set of sound frequencies. By using the MPLAB X IDE software and a SNAP Debugger, one of the timers on the microcontroller was set up through C code and would trigger an interrupt at frequencies corresponding to musical notes. The interrupt toggled the digital output to the buzzer, which produced the notes.
  - An Output Compare peripheral was utilized to produce a PWM signal that controls the speed of a DC motor. The microcontroller was connected to an L293DNE motor driver and a push button which was programmed to trigger an external interrupt. Every push of the button increased the PWM duty cycle, and consequently the speed of the DC motor, by 25%, and it reset back to 0% once it reached 100%.
- **MATLAB:**
  - Used MATLAB programming language during a laboratory project to create an iterative experiment which manipulated signals from the time domain to the frequency domain and then plotted the response with added Gaussian noise to represent signal corruption during data transmission. The results were then compiled to validate the effectiveness of different error correction routines with variable levels of Gaussian noise.
- **Electronic Circuits:**
  - Four 1N4004 diodes were used to design a full-wave bridge rectifier which converted an AC input voltage to purely DC voltage. The diodes were arranged in pairs where two were forward-biased, two were reverse-biased, and a load resistor and load capacitor were placed in parallel in the middle. The output was connected to an oscilloscope where the results could be displayed, and it was observed that the rectifier turned the waveform into a straight line with a negligible ripple factor.

## PROFESSIONAL EXPERIENCE

**Greenville Technical College Testing Center | Test Proctor**

June 2022 - May 2023

- Administered testing for new and returning students
- Resolved and troubleshooted technical issues noticed during the testing process

**Magna Exteriors, Decostar | Controls Engineering Intern**

May 2024 - present

- Improve and design machine PLC logic
- Improve and design Maple and Proface machine HMIs.
- Troubleshoot and run maintenance on plant machinery.
- Program and troubleshoot Fanuc robotic arms.