Jacob A. Likins

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Education

Olin College of Engineering, Needham, MA,
Bachelor of Science, Electrical and Computing Engineering, May 2028

- **Relevant Coursework:** Linear Algebra, Modeling & Simulation, Engineer Design, software design, Introduction to Circuits, 3-D Modeling, Matlab, Calculus I & II,

South Carolina Governor's School of Mathematics and Science, Hartsville, SC,
Governors high school degree, May 2024

- **Relevant Coursework:** Writing in STEM, Robotics, Engineering disciplines, Engineering Product Design, AP Chemistry, AP Physics Electromagnetism and Mechanics

Key Skills

Tools: SolidWorks, Git, Android Studio, Isaac Simulator, KiCad, Microsoft Office, Visual Studio Code (VS code), Arduino, Jupyter Notebook, Oscilloscope, Linux, Shell, APIs, Web Scrapping, VHDL

Software\Firmware Languages: MATLAB, Python, C/C++

Other Skills: Welding, Soldering, Wood Cutting, 3-D printing

Experience

Clemson University International Center for Automotive Research
Intern, *6/2023 – 7/2023, Greenville, SC*

- Designed a robot in SolidWorks, then used VEX parts to create a robot
- Programmed the robot's motors and sensors in C++ inside of VS Code
- Used Isaac Simulator to test robot in simulation and compared to real life robot
- Presented at the Governor's Research Colloquium

First Technical Robotics
Team Captain, *9/2022 – 3/2024, Hartsville, SC*

- Led team to build functional robot at end of First Tech Challenge season
- Used SolidWorks to design robot and create custom 3-D printed parts for it
- Programmed robot in Java inside of Android Studios
- Taught team members how to use SolidWorks, 3-D Print, and Design robot by putting together workshops to help practice these skills

Will's Remodeling
General Contracting, *4/2022 – 8/2024, Westminster, SC*

- Used measuring tools and saws to cut wood from stairs, new walls, and decks
- Read schematics to rewire electrical systems in house

Formula Electric
Electrical Member, *9/2024 – present, Needham, MA*

- Contributes to the design, construction, and testing of an electric vehicle for the Formula SAE Electric competition.
- Created PCB boards for battery management, throttle sensing, and pre-charge/discharge board
- Integrated regen breaking on the car by changing firmware in C to increase endurance on vehicle
- Programed the motor controller to work with our CAN protocol
- Created and presented design reviews to senior engineers

Projects

Remote Controllable Golf Cart, *8/2023 – 4/2024*

- Took Golf Cart and welded an actuator onto the front to control steering
- Used an Arduino Nano to control electronic components and soldered wiring together

Morse Code MATLAB Project, *3/2024 – 4/2024*

- Used MATLAB to take text then translate the text into Morse Code
- Connected MATLAB to an AUDRINO to control LED which would flash the Morse Code