

Nathan Eads

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Education

University of Alabama, Freshman (2019 – 2023)

Mechanical Engineering

Honor's College & UA Scholar Merit Scholarship

3.7 GPA, Dean's List

Riverwood High School (2015 – 2019)

3.8 GPA, Principal's List

Engineering Experience

University of Alabama 3D Printing Lab (August 2019 – Present)

- Efficiently manage, maintain, and repair fifteen 3D printers of various breeds and designs
- Advise students on 3D printing mechanics, SolidWorks, 3DPrinterOS & Other 3D printing software
- Accurately perform 3D scanning with Artec Space Spider, Artec Eva, and associated software

Project Work

Bama Racing Team – Electrical SubTeam Leader (September 2019 – Present)

- Install a sensor network and a dashboard display unit to record and monitor engine temperature, RPM, and speed during races.
- Oversee and maintain the electronic engine choke system on both race buggies.

Design and Fabrication of Electric Skateboard (2019)

- Constructed Lithium-Ion battery pack and balance charging system.
- Built a custom belt drive chain and wheel hub to translate power from the 180kV motor to movement.

Director of Operations, Riverwood High School MakerSpace (2018 - 2019)

- Professionally conducted communications between my peers, school administrators, corporate & private donors, and material and tool suppliers.
- Responsibly managed a \$50,000 budget to furnish a MakerSpace for future students.

Various Arduino Based Projects

- Modified dorm room door lock with an NFC reader to read my Student ID card's integrated NFC coil.
- Hacked an R2-D2 toy robot and replaced the standard PCBs with a Bluetooth breakout board, a set of relays, and Arduino, all controlled by a specialized Android application.

Skills

Computer & Hardware

- Advanced 3D Printing for Fabrication & Rapid Prototyping
- Custom desktop computers, IT, & Networking
- Basic Wood & Metal Fabrication Skills
- Shop/Lab Safety & Etiquette
- Car & Engine Mechanics
- Basic Robotics & Mechatronics
- Soldering & Small Electronic Circuits

Software, Code, & Miscellaneous

- Extensive Experience with SolidWorks, Autodesk Inventor, Cura & 3DPrinterOS Slicers
- HTML/CSS & Website Design
- Arduino IDE & Arduino Hardware
- JavaScript, Android Studio, & Google Cloud APIs
- Basic MATLAB & Python
- Microsoft Office, Rudimentary Adobe Photoshop & Adobe Illustrator

Activities & Leadership

University of Alabama

- Society of Automotive Engineers
- American Society of Mechanical Engineers
- TUSKA UAV Design Team (Drone Construction and Flight Group)
- UA Astronomical Society
- UA Undergraduate Historical Society

Leadership

- Boy Scouts & Venture Scouts
 - Eagle Scout
 - Organized gear for over 100 active Scouts
 - Coded Website for Venture Crew
- Robotics Team CAD Team Leader
- Tutor at the Riverwood Writing Center
- Conversational French
 - Exchanged with French family over several summers