



# CRAIG MORTON

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## Summary

Extremely driven mechanical engineering student with over a year's worth of relevant design & analyst experience with NASA & Sierra Nevada Corporation's Space Systems Group

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## Education and Training

**Bachelor of Science:** Mechanical Engineering

Expected in 05/2022

North Carolina State University | Raleigh, NC

- 4.00 GPA
- Dean's List Honoree (Every Semester)
- *ENDOWED* Engineering Scholarship Recipient

**Some College (No Degree):** Mechanical Engineering

University College Cork | Cork, Ireland | Study Abroad

### Relevant Courses:

Thermodynamics I & II, Heat Transfer, Statics, Dynamics, Electric Power Systems, Solid & Structural Mechanics, Structural Materials, Machine Dynamics, Fluid Mechanics, Automatic Control Systems, Applied Finite Element Analysis, Rocket Propulsion, Space Exploration Systems

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## Skills

- 3D/2D Design Software (SolidWorks, AutoCAD)
  - MATLAB / HTML / Python Coding
  - Microsoft Office and Excel
  - ANSYS Simulation Software
  - FEA and Failure Analysis
  - Orbital Mechanics / Rocket Propulsion
  - Design & Drawing with GD&T
  - Proficient in Spanish
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## Experience

**Aircraft Design Intern (40 hrs/week)**

06/2021 - 08/2021

NASA Glenn Research Center | Cleveland, OH (remote)

- Research and 3D Design of integral structural components for NASA Electrified Aircraft Propulsion concept vehicle flight demonstrator through SolidWorks
- Additional research into aircraft materials and assignment to components based on cost, weight, and strength.
- Preliminary structural analysis and proof of design through ANSYS Mechanical
- Presented design to NASA teams on several occasions, and wrote final report of project to AIAA standards

**Mechanical Engineering Co-op (40 hrs/week)**

01/2020 - 01/2021

Sierra Nevada Corporation Space Systems Group | Durham, NC

- Worked full time for entire year primarily on design and analyst teams
- Created various 3D models and engineering drawings in SolidWorks to be manufactured or 3D-printed. These included mass simulators, improvements to existing testing fixtures, vibration testing components, etc.
- Assisted with conduction of Stress and Failure Analyses on large assemblies through ANSYS / Finite Element Analysis (FEA)
- Adapted to pandemic and maintained productivity through transition to remote work
- Gave project report presentations to engineering team in Durham after each quarter

### **SOLIDWORKS Support Drafter (15 hrs/week)**

02/2021 - Present

Jordan Electric Motors Inc. | Sanford, NC

- Use SOLIDWORKS to create models, part drawings, assembly drawings, and drawings for manufacturing
- Carrying out company program transfer from AutoCAD to SOLIDWORKS, gaining a much deeper understanding of both programs
- Develop more knowledge of electric motor design and manufacturing techniques while working under the supervision of a senior engineer

### **Summer Employment Intern (40 hrs/week)**

05/2018 - 08/2018

Easter Seals Tristate | Cincinnati, OH

- Helped run Easterseals non-profit summer employment program for underprivileged youth in Clermont County, Ohio
- Small team successfully oversaw 100 teens: organized entire program, gathered all necessary information, tracked their progress, followed up with appointments
- Worked with and documented sensitive information from State and maintained privacy of personal files

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## Additional Experience

### **Haiti Volunteer Trip – June 2017**

- Went to Haiti with mission group to continue relief efforts from the devastating 2010 earthquake
- Design and construction of 5 small houses in a recovering community, completely changing the lives of several families still struggling to get back on their feet

### **School / Club Involvement**

- High Powered Rocketry Club, AIAA NC State Student Branch, TKE Fraternity

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## References

### **Jonathan Parker**

Direct Supervisor - Mechanical Design Engineer at Sierra Nevada Corporation

[jonathan.parker@sncorp.com](mailto:jonathan.parker@sncorp.com)

(919) 740-5780

### **Wes Ballew**

Senior Structural Engineer at Sierra Nevada Corporation

[wesley.ballew@sncorp.com](mailto:wesley.ballew@sncorp.com)

(919) 606-7097

### **Bradley French**

Mentor - Aeronautics and Ground Based Systems

[bradley.d.french@nasa.gov](mailto:bradley.d.french@nasa.gov)

(513) 649-4390

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## Websites/ Portfolios

- <https://www.linkedin.com/in/craig-morton-482b45149/>
- <https://craigmorton.wordpress.ncsu.edu/>