Noah Holland-Moritz

2800 Aurora Ave, Boulder, CO, 80303 | 626-390-6277 | nhollandmoritz@gmail.com

Objective

Physics graduate seeking a position as a mechanical, electrical, systems, or software engineer. Looking to work directly with hardware or equipment and low-level or high-level software in a team-based environment.

Education

University of Colorado Boulder | Engineering Physics | BS | GPA: 3.154 **May 2018**

- Minors: Computer Science & Astronomy

Skills & Abilities

- Programming Languages
  - Assembly, C, C++, Python, R, Bash, Java
  - GDB Debugging, Valgrind, RTOS, Linux, Git
- Software Packages
  - MATLAB, SolidWorks, Mastercam, Mathematica, Altium, Windows Office Suite, NumPy, MatPlotLib
- Machining, Electronics, and Rapid Prototyping
  - Manual mill, lathe, band saw, sheet metal tools, tapping, surface mount soldering, chip reflowing
  - 3D printing, laser cutting, limited CNC experience
- Formal Presentation skills (PDR, CDR, TRR)
- Documentation and technical report writeup

Experience

ELECTRONIC POWER SYSTEMS ENGINEER | Colorado Space Grant Consortium **Sept. 2017 – June 2018**

- Tested and prepared electronic power system of spacecraft for flight readiness
  - Worked with Lithium Ion batteries, microprocessors, and space-rated solar cells
  - Helped design and construct power system hardware including solar panels and batteries
    - Machined parts, assembled PCBs and other electronics, and performed system testing
    - Investigated hardware issues, assembled and verified flight hardware in a clean room environment
  - Prepared satellite flight hardware for Vibe and TVAC testing before launch
  - Formally presented during TRR to Ball Aerospace representatives
  - Worked professionally as a client to Ball Aerospace, EnerSys, and Altius Space Machines

MACHINE SHOP ASSISTANT | Physics Trades Teaching Lab **June – Aug. 2017**

- Worked with mills, lathes, drill presses, band saws and other standard tools
  - Made parts, organized tools, and repaired shop machines

DLA LAB ASSISTANT | CU Boulder Marshall Lab **Aug. 2016 – May 2017**

- Wrote software to analyze electromagnetic and RF data from lightning strikes using MATLAB
  - Used cross correlation tools to simulate and extract strike events from electromagnetic data
  - Compared data from our instrument to data from the National Lightning Detection Network
  - Used MATLAB tools to increase efficiency and performance of the program by a factor of 10
  - Formally presented results to the Discovery Learning Apprenticeship program directors

SUMMER INTERN | Jet Propulsion Laboratory **Summer 2015 & 2016**

- Year 1: Analyzed video data from the laser communication tracking camera using MATLAB
  - Wrote algorithms to estimate atmospheric coherence length
  - Set up supercomputing resources for analysis and formally presented the findings
- Year 2: Analyzed infrared camera data for characterization of cloud effects on laser communication
  - Debugged, redesigned, and improved existing analysis software
  - Produced results that were consistent with old data; analyzed new data from 2015-2016

Accomplishments and Interests

- CU Presidential & Engineering Scholarships
- Engineering Honors Program
- National Merit Commended Scholar
- 2018 Physics Department Tradesman Award
- Machined a complete Stirling Cycle engine
- Built an Arduino controlled star tracker