Nicholas T. Masso

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Education

Junior at Purdue University (2017-present)
3.75 GPA
Major: Aeronautical and Astronautical Engineering (With Honors)
Minor: Computer Science
Minor: Mathematics

Awards

Purdue Dean's List 2018
Purdue Dean's List 2019
Level 1 HPR Certified

Computer Skills

Microsoft Suite (Word, Excel, PowerPoint, Publisher)
Linux OS Experience (multiple distributions)
LaTeX
Programming Languages
- Python
- C / C++
- Java
- MATLAB

CAD software
- SolidWorks
- CATIA
- Inventor
- Fusion 360

3D Printing
- Mediums:
  - FDM, SLA, SLS
- Slicing:
  - Slic3r
  - Cura

Shop Knowledge

- Safety practices
- Hand tools
- Soldering
- Laser cutting
- CNC machining
- PCB designing

Work Experience

Intern, Rotorcraft Aeromechanics - NASA Ames Research Center
June 2019 – August 2019

Project: Created a database access module in Python for use with NFAC data acquisition systems, for the purpose of building a new user-facing program. Produced full code documentation and a report on development process.

- Began with interface rules and documentation from the late 1990's
- Designed interfaces and modules for efficiently accessing raw data
- Built and ran tests on written code to pass checkpoints
- Used backend for performing statistical analysis on large data sets
- Generated formatted PDF reports for standard statistical operations

TA, Introduction to Honors Engineering - Purdue University
August 2018 – Present

Working closely with two teams of 4 freshman engineering students, grading work and offering assistance in areas of physics, programming, and engineering concepts. Updating and maintaining assignments and code base.

- Developing the course backend, updating and commenting code for assignments in Python and MATLAB
- Changing and updating old code, creating documentation for readability
- Scripting standard operations, used by TA's and students
- Managing software repositories and version tracking
- Modifying the Debian-based OS for control and student usability

Extracurricular Activities

Design Lead, **Commercial Rocketry Team** - Purdue Orbital
Sept. 2017 – Present

Directing the construction of rockets to fly on commercially available composite propellant, aiding in certifying team members for high-power rocketry, and performing flight and ground tests of sensors and electronics.

- Managing technical documentation (SOPs, RFAIs, etc.) for operations and presenting at Design Reviews for our supervising board
- Facilitating inter-team communication for payload standards, mounting hardware, and power requirements for various electronics
- Design and Prototyping with CAD and 3D Printing
- Manufacturing aluminum and fiberglass parts using CNC mills, CNC lathes, laser cutters, and various hand tools.
- Ensuring safety protocol is followed during construction and launches