

HAYDEN PERNIA

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Education

Bachelor of Science, Mechanical Engineering
Minor in Graphic Communications
North Carolina State University, Raleigh, NC
(Graduation Dec 2017, GPA 3.1)

Work Experience

NASA Digital Twin Research – Airframe Designer, Safety Pilot
Raleigh, NC, Dec 2016 – Dec 2017

- Developed a testbed unmanned aircraft with a small student team for testing embedded sensor networks and structural models in partnership with NASA Langley and Stanford University.
- Utilized CAD, airfoil and stability analysis, and SiL simulation software to fully design and test the aircraft prior to construction and flight.
- Constructed the aircraft using cored composite layups and built-up structures.
- NC State team focused on airframe design, operation, and onboard data collection and processing.

PrecisionHawk USA – Flight Operations Intern
Raleigh, NC, May 2017-Aug 2017

- Worked in the Flight Operations department of a prominent remote sensing company.
- Operated and maintained a variety of UAS platforms in diverse environments, collecting and processing visual, multi-spectral, and thermal data for agriculture and construction.
- Conducted presentations, specialized training, and demos to clients from corporations and government agencies.

Extracurricular

Aerial Robotics Club at NC State – President

- Principal designer of all-new aircraft to better meet requirements for 2017-2018 competition.
- Long range mid-sized aircraft with modular imagery, computing, communications, and avionics systems.
- Experience with airframe construction and integration/operation of autopilot systems.
- Oversaw all club operations towards international competition as President for 2016-2017.

Skills

Software

- Proficient in SolidWorks (CSWA), AutoCAD, Microsoft Office.
- Knowledgeable in MATLAB/Simulink, Creo, Inventor.

Manufacturing

- DFMA practices for traditional machining, CNC, rapid prototyping, additive manufacturing.
- Producing drawings and documentation per GD&T, ASME Y14.5-2009 standards.
- Experienced in composite layup fabrication.

Language

- Spanish professional proficiency, including reading and writing.

Communication and Teamwork

- Competent in producing technical reports and giving presentations to corporations and government entities.