HAYDEN PERNIA

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EDUCATION:

North Carolina State University
Bachelor of Science, Mechanical Engineering, 2013 – 2017
Minor, Graphic Communications

EXPERIENCE:

NASA Digital Twin Research – Airframe Designer, Safety Pilot
Raleigh, NC, Dec. 2016 – Dec. 2017
Development project for an aircraft to be designed with specialized sensor networks for onboard data collection and processing.

- Designed and constructed an unmanned aircraft with a 3-person undergraduate team for testing embedded sensor networks and structural models in collaboration 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.

PrecisionHawk USA – Flight Operations Intern
Raleigh, NC, May 2017 – Aug. 2017
Provider of UAV remote sensing applications and data processing services in industries such as agriculture, construction, mining and energy.

- 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 corporate and government agency clients.

Aerial Robotics Club at NC State – President
Raleigh, NC, Sept. 2015 – Present

- Principal designer of all-new long range midsize unmanned aircraft to better meet requirements for the 2018 AUVSI SUAS competition, with improved modular imagery, computing, communications, and avionics systems.
- Oversaw all club operations and competition production activities as Club President, 2016-2017.
- Experience with airframe design, construction, and integration/operation of autopilot systems.

SKILLS:

Software

- SolidWorks (CSWA), AutoCAD, MATLAB/Simulink, Creo, Inventor, MS Office Suite

Manufacturing

- Utilization of Design for Manufacture and Assembly (DFMA) practices for traditional machining, CNC, rapid prototyping, additive manufacturing.
- Production of drawings and documentation per GD&T ASME Y14.5-2009 standards for course projects and Senior Design Project.
- Experience with composite structure fabrication using cored and vacuum molds.

Language

- Spanish - speaking, reading, writing with professional proficiency.

Design Portfolio: pernia.xyz/portfolio