

George R. Anderson

Aeronautical Engineer

Ph.D plus 7 years experience in physics, modeling and simulation, analysis and software development. I love airplanes, and I'm passionate about enriching life with more flight. I'm comfortable diving into complex problems and using data and analysis to drive decisions.

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📍 Santa Cruz, CA

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WORK EXPERIENCE

Aeronautical Engineer

Camp Six

02/2018 - Present

Santa Cruz, CA

Vertical pickup aircraft startup that pivoted to rapid manufacturing

Achievements/Tasks

- Head of flight physics for a project exploring long line loiter for autonomous vertical payload delivery with fixed wing aircraft.
- Developed a complete SITL flight simulator for our aircraft (Unity + Pixhawk + Mapbox).
- Sized 10+ autonomous aircraft -- most were built and flown. Aerodynamic, structural, and aeroelastic predictions, weight estimation, control surface sizing, trim, stability, basic propulsion sizing, and mission performance estimation.
- Developed novel flight control algorithms for loiter maneuver, including modified aircraft control laws, and handling of laggy remote payloads.
- Wrote a complete log searcher and parser for flight logs, and used this to do performance correlation from flight data.
- Developed technical aspects of company's long-term unit economic model for drone delivery.
- Managed early regulatory conversations, flight operations manuals, and wrote successful Part 107 altitude waivers. Technical conversations with patent lawyers.
- After pivot to rapid manufacturing, wrote the full stack of code: scripted CAD-generated geometry (Onshape, Featurescript), firmware for our custom CNC machines, and structural analysis and geometry optimization software.

Research Engineer

Science & Technology Corp. (at NASA Ames)

10/2015 - 01/2018

Mountain View, CA

Achievements/Tasks

- Developer for NASA's Cart3D CFD software, focused on shape optimization and geometry parameterization. Wrote code deployed to 500+ users.
- Awarded AIAA 2018 Applied Aerodynamics Best Paper for publication "Cart3D Simulations for the Second AIAA Sonic Boom Prediction Workshop"
- Developed an automatic adaptive shape parameterization approach for aerodynamic shape optimization.
- Extensive Cart3D analysis, especially for sonic boom predictions.

SKILLS

Physics/math model derivation

Coding in Python, C/C++, C#, some JS. Unix/Mac CLI

Aero: AVL/Xfoil/Qprop, Cart3D

High performance computing

Hardware: Pixhawk, Arduino, steppers, servos, sensors

Onshape (CAD), scripted geometry generation

EDUCATION

— Ph.D. Aeronautics & Astronautics Stanford University

08/2010 - 12/2015

— B.S. Mechanical Engineering Montana State University

08/2004 - 05/2008

OTHER

Hobbies/interests: music performance (viola, choral), hiking, skiing, gardening, puzzle games

Several aerospace research publications

Intermediate proficiency in Russian