Matthew Ryan Altis

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Education

Georgia Institute of Technology — **Atlanta, Ga**

Bachelor of Science in Aerospace Engineering — *Fall 2018-Fall 2021*

GPA: 3.53

Skills

Relevant Coursework- Wind Tunnel Tests, Tensile Testing**,** Propulsion Systems, Control Systems, Research Papers, FAA Regulations, Dynamics, Aircraft Design, Statistics, Structural Analysis, Lab Reports, Technical Communication

Software- Adobe Creative Suite, JavaScript, LabView, Matlab, Microsoft Office Suite, HTML, CSS, Python, Simulink, SolidWorks

Hardware- Analog Circuits, Oscilloscope, Multimeter, Strain Gauge, 3D Printing, RC Plane Design

Projects

Unmanned Combat Air Vehicle Design (January-May 2021)-

- Designed vehicle based on given mission, performance, and cost requirements
- Iterative design process utilized for sizing, configuration, and development of subsystems
- Final prototype cost 330% cheaper than F-22 and achieved 9.75 flight hours per F-22 hour

eVTOL System Design and Market Study (Georgia Tech: August-December 2020)-

- Developed marketable program for Urban Air Mobility, from CONOPS to program timeline
- Optimization of functional requirements and vehicle design showed transport of 150+ passengers per vehicle day, with program development attainable in 5 years

Wind Turbine Site Feasibility Analysis (May-August 2021)-

- Selected potential wind turbine site and verified economic feasibility of site
- Final turbine design produced energy cost of 8 cents/KW hour, outcompeting leading regional energy providers

Hypersonic Flight Program (May-Aug 2021)-

- Developed MATLAB program to compute downstream conditions, forces, and heating of hypersonic vehicle with user-input conditions
- Output values within 4% margin of error from equilibrium code solutions

Orbital Location Program (Sep-Dec 2020)-

- MATLAB program written to take in location of initial orbital object location from known radar location
- Outputs all 6 primary orbital elements and final position and velocity after elapsed time

Model Rocket (Sep-Nov 2019)-

- Simulated and constructed rocket using kit and custom 3D printed parts to store payload
- Rocket launch test achieved 2% error from required apogee height

Mars Rover Design (Jan-May 2020)-

- Constructed individual SolidWorks parts and created assembly for Mars terraforming vehicle prototype
- Utilized dimensioned engineering drawings to plan and manage project design goals

NTSB/FAA Case Study Project (Aug-Oct 2021)-

- Examined the role of regulatory agencies in the treatments of safety-critical aircraft systems
- Identified certification issues and process improvements to improve system safety and ensure learning outcome from case studies extends to regulatory agencies

Extracurriculars/Work Experience

Amazon Prime (May-August 2020):

- Received and prepared Amazon orders for delivery or pickup
- Frequent communication with customers to ensure satisfactory, accurate, and timely service.

Recording Studio/Band Founder (2015-Present):

- Founded and played drums for multiple bands, performing shows across multiple cities and states.
- Run personal recording studio to record and produce multiple albums, Eps, and singles, for my own bands as well as other artists.