Andy Vu

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EDUCATION

Carnegie Mellon University Pittsburgh, PA
Mechanical Engineering, Master of Science-Research May 2026

Georgia Institute of Technology Atlanta, GA
Mechanical Engineering, Bachelor of Science December 2022
Highest Honors

WORK EXPERIENCE

Earthly Dynamics, LLC – Roswell, GA May 2021 – August 2024
Mechanical Engineer, Flight Test Engineer

- Developed and lead experiments to provide proof of concept for paragliding test program, resulting in the green lighting of a $3.2M program
- Lead 10+ flight tests in conjunction with government parties, yielding a 98% success rate across 120+ drops
- Designed and fabricated modular, remote controllable, flight test payloads for on-board data collection and use at altitudes exceeding 1000 ft MSL
- Processed and evaluated data to determine the viability of each experiment and how to continue to produce successful and meaningful results.

PROJECTS

Jamming Gait on A Snake Robot August 2024 - Present
Advisor: Dr. Howie Choset (Carnegie Mellon University)
Area of Research: Controls, Gait Design, Robot Manipulation, Motion Planning

- Developed a force-controlled, windowed anchoring behavior that allows that snake robot to resist wrenches in gravity and microgravity
- Coordinated the remaining links of the snake robot to move to a desired location while avoiding obstacles in microgravity

Bleed-Air of A Single-Surface Parafoil January 2022 – August 2024
Advisor: Dr. Mark Costello (Earthly Dynamics, Georgia Institute of Technology)
Area of Research: Controls, Hardware Design, Fluid Dynamics

- Simulated the effect of different vent shapes to determine the most effective bleed-air loss
- Altered three single-surface parafoils to produce significant air loss, impacting the glide slope ratio
- Designed a remote-controllable testing platform to collect data in a repeatable and consistent fashion

RESEARCH PAPERS

- Ward, D. J., **Vu, A**. L., and Costello, M., "Towards the Design of a Bleed-Air Actuator for Single Surface Parafoils," American Institute of Aeronautics and Astronautics Inc, AIAA, 2024 https://doi.org/10.2514/1.C037791.
- Ward, D. J., **Vu, A**. L., and Costello, M., "Control Authority of a Single-Surface Parafoil with Bleed-Air Spoilers," Journal of Aircraft, Vol. 61, No. 6, pp. 1–7. https://doi.org/10.2514/1.C037791, URL https://doi.org/10.2514/1.C037791.
- Ward, D. J., **Vu, A**. L., Ward, M., and Costello, M., "Bleed-Air Control of a Single Surface Parafoil Canopy," American Institute of Aeronautics and Astronautics Inc, AIAA, 2022. https://doi.org/10.2514/6.2022-2716.

SKILLS

Programming Languages: Python, Embedded C, Julia, ROS
Application Programs: SolidWorks, COMSOL, Autodesk Fusion 360, MATLAB. pyBullet, CoppeliaSim, KiCad, PSoC Creator, Altium, Arm Keil Studio