



Senior Guidance, Navigation and Controls (GNC)

ABOUT MightyFly

Do you want to change the world? MightyFly is creating the future of logistics with autonomous cargo aircraft. Our mission is to provide rapid and efficient access to goods. Join the MightyFly team and help us change the world.

MightyFly is leading the logistics revolution. Existing logistics infrastructure is time and resource intensive. We are building the future of logistics with autonomous, carbon neutral cargo aircraft with a cargo capacity of 500 pounds and a range of 600 miles. Our logistics service will enable consumers to access affordable expedited delivery from all retailers, anywhere on the globe. It will make it possible for businesses to offer affordable expedited delivery. MightyFly's just-in-time logistics using unmanned aircraft will fundamentally transform how goods move around the globe.

ABOUT THE ROLE

As a GNC engineer at MightyFly, you will own the core functionality of the autopilot for one of the world's largest and fastest autonomous cargo aircraft. Specifically, you will be responsible for the design, implementation and test of key guidance, estimation, and flight control algorithms onboard. Your responsibilities extend from building and applying high-fidelity models of our aircraft, to writing GNC algorithms, to ensuring the robustness and performance throughout the flight envelope. You will work closely with the other team members to ensure the seamless integration and testing of your developed algorithms.

WHAT YOU'LL DO

- The design, implementation, verification and deployment of guidance, navigation and control algorithms on board MightyFly's autonomous cargo aircraft.
- The development of linear and non-linear simulations of our aircraft's entire flight envelope based on aerodynamics models, and physics-based modeling techniques.
- Application of proven analysis and model-based design techniques to optimize aircraft control laws for desired stability and performance characteristics.
- Working with the software team to create tools and tests to demonstrate the performance of your designs using both Monte Carlo simulations and regression testing.
- The development, implementation and test of contingency strategies to ensure safe and predictable system response during off-nominal flight conditions.



- Experimental verification of the developed algorithms by supporting and participating in flight tests.
- Working with a multidisciplinary team to evaluate, select, and integrate GNC hardware (i.e. sensors, actuators, and processors) to meet performance requirements.
- Analyzing flight data to investigate potential problems and regressions and find room for improvements.
- Documenting designs and tests for the purpose of FAA certification.

WHAT YOU'LL BRING

- General
 - A passion for building systems from the ground up
 - A can-do attitude for tackling and solving complex problems
 - Ability to work and thrive in a dynamic and fast-paced environment
 - A self-motivated attitude, with the ability to manage your own responsibilities in an unstructured work environment
- Technical
 - General guidance, navigation, and control experience (3+ years) and the ability to dive into and understand our GNC system
 - Deep expertise in one or more of the following areas: estimation, dynamic modeling of complex systems, advanced linear control analysis, or optimal control with uncertainty
 - Excellent applied mathematical fundamentals in linear algebra, statistics, and probability
 - Software engineering skills (C++, C, Matlab/Simulink, Python)
 - Experience developing embedded control systems, estimators, or simulations from scratch and experience testing these systems on real-world hardware
 - A balanced approach to theoretical, simulation, and hardware/flight test analysis in order to demonstrate your designs
 - Experience working on autonomous vehicles software
- Planning & Partnering
 - Ability to plan and deliver on time
 - Excellent technical communication skills
 - Organizational skills
- Nice to have
 - Familiarity with aviation certification standards & processes
 - Experience with large UAVs or VTOL aircraft

WHAT ELSE YOU NEED TO KNOW

Equal opportunity:

MightyFly is an equal opportunity employer and prohibits discrimination and harassment of any type. We do not discriminate based upon race, religion, color, national origin, sex (including pregnancy, childbirth, reproductive health decisions, or related medical conditions), sexual

orientation, gender identity, gender expression, age, status as a protected veteran, status as an individual with a disability, genetic information, political views or activity, or other applicable legally protected characteristics.

Diversity:

MightyFly values diversity and welcomes applications from those who are traditionally underrepresented in the tech industry. We are an international team, led by a female CEO.

Job Location:

- Bay Area.
- Remote work might be possible, but not preferred, on a case-by-case basis.

Culture:

- We are aviation and aerospace enthusiasts who believe the sky is *not* the limit.
- **Teamwork:** We believe that to achieve great results we need great teamwork.
- **Working hard:** Building reliable aviation and logistics products is really hard but also exciting, challenging, and rewarding.
- **Having fun:** We believe that hard work needs to be coupled with fun. We love hanging out beyond the workday, hosting team dinners, and organizing fun activities. We love the outdoors and outdoor sports. And of course, we love flying.
- **Celebrating wins large and small.**
- **Creativity.** We love and encourage creativity. The best ideas emerge when our working environment fosters out-of-the-box thinking.
- **Humility:** Let's leave the ego at the door so we can work together to create meaningful solutions.
- **Equity, inclusivity, and respect** for the diversity of life and work experiences that each individual brings to the team.
- **Transparency, honesty, and integrity.**

Benefits:

- Competitive health, dental, and vision insurance.
- Unlimited paid time off.
- Stock option plan.
- Working on cutting-edge products to transform our future.
- Working with a diverse and highly skilled team.
- Shaping and defining company culture and values.

APPLY

Email a copy of your resume with a brief introduction about yourself to careers@mightyflying.com

