

Kasper Atkinson

kna37@cornell.edu | linkedin.com/in/kasper-atkinson-kna37/ | +1 (917) 783-4353

EDUCATION

CORNELL COLLEGE OF ENGINEERING

SIBLEY SCHOOL OF MECHANICAL AND AEROSPACE ENGINEERING

M.Eng. Aerospace Engineering, B.S. Mechanical Engineering

Ithaca, NY

Anticipated Graduation May 2027

GPA: 4.1/4.0

WORK EXPERIENCE

Imperial College London

Microglider Controls Intern

London, England

June 2025 – August 2025

- Developed MATLAB-based aerodynamic models for a dragonfly-inspired, tailless tandem-wing 22-gram microglider.
- Simulated a mass-shifting pitch control system using PID feedback to achieve sub-10-second stable glide recovery.
- Ran multi-parameter design sweeps to optimize lift-to-drag ratio while maintaining static and dynamic stability.
- Evaluated 3 trim-linearization methods, judging speed-accuracy tradeoffs to extract short-period and phugoid modes.

Comarch SA

Forecasting Analytics Intern

Kraków, Poland

June 2024 – July 2024

- Delivered ML script combining 13 different weighted and optimized prediction models to forecast server utilization.
- Co-developed program to securely retrieve internal company database metrics live for the Comarch Infraspaces Cloud.

LEADERSHIP AND EXTRACURRICULARS

Cornell Design Build Fly

Full-Team Lead

Ithaca, NY

June 2025 – Present

- Directed all engineering and administrative decisions across four subteams for aircraft development with \$35k budget.
- Co-authored 60-page AIAA technical report, documenting mission-centered design, analysis, fabrication and testing.
- Ran 40-person team through 10-month competition cycle: exploration, detailed design, manufacturing, testing.

Propulsion Subteam Lead

June 2024 – May 2025

- Designed and implemented program to iteratively assess various propulsion and electronic system configurations.
- Presented and directed 6-person subteam through 3 critical design reviews to justify design and component decisions.

C-Salt

Member of the Mechanical Subteam

Ithaca, NY

Aug 2024 – Present

- Co-founded wave-energy student team; grew to 20 members competing in DOE's Marine Energy Collegiate Contest.
- Prepared comprehensive CADs of high-pressure water piston compressor for ocean-water desalination in Guam.

PROJECTS

Aircraft Sizing & Optimization

- Built MATLAB framework integrating aviation aerodynamics, structural analysis, propulsion, and mission simulation.
- Quantified performance via stability analysis, flight-envelope assessment, and competition-driven mission scoring.
- Applied genetic algorithm to evolve thousands of high-fidelity aircraft designs, converging to optimal scoring results.

Wave-Energy Converter

- Designed oscillating-flap WEC driving piston pump, producing 8 bar output for reverse osmosis desalination.
- Modeled hydrodynamic torque surfaces across 5 wave states; validated predictions in Cornell SeaLab flume testing.

Computational Propeller Modelling

- Developed MATLAB BEMT script to predict thrust and torque from variable geometry and operating conditions.
- Enhanced fidelity by interpolating XFoil Cl/Cd tables across AoA/Re, capturing off-design and stall behavior.

SKILLS & INTERESTS

- Skills: Java, Python, MATLAB, CAD (SolidWorks), Machine-Shop Trained, ANSYS Fluent, 3D Printing, XFoil.
- Interests: Languages, Aviation History, Acoustic Guitar, Cooking, Skiing.
- Languages: English (C2), Polish (C2), French (B2), German (B1).