

Kenneth Chang

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EDUCATION

Georgia Institute of Technology, Atlanta, GA

- **Major:** Bachelor of Science in Aerospace Engineering | BS/MS Honors Program
- **GPA:** 3.93/4.00
- **Extracurriculars:** Georgia Tech Supersonics | AIAA | VSA

May 2027

SKILLS | COURSES | TOOLS

Skills: MATLAB, SolidWorks, Python, Star-CCM+, LabVIEW, OpenVSP, Excel, nTop, AVL, XFOIL, LabJack, DAQ, Microsoft Office, GD&T, DFM

Relevant Courses: Aerodynamics, Thermodynamics, Fluid Mechanics, Jet and Rocket Propulsion, Vehicle Performance, Circuits and Electronics, Material Science, Dynamics, System Dynamics, Structures

Tools: Oscilloscopes, Digital Multimeters, Function Generators, Wind Tunnel, Tensile Tester, Waterjet, Electrical Wiring

RELEVANT EXPERIENCE

Undergraduate Research Assistant - Ben T. Zinn Combustion Laboratory | Georgia Tech

Jan 2026 – Present

- Operated and troubleshot an experimental ammonia cracking burner rig for Amogy Combustor, interpreting P&ID diagrams and following detailed SOPs to safely set up, ignite, run, and shut down H₂/N₂/NH₃ combustion tests.
- Control combustion test hardware using LabVIEW to operate mass flow controllers, solenoid valves, ignition sequencing, and emergency shutdown systems during live testing
- Characterized a Collins Aerospace burner by instrumenting the rig with thermocouples to map spatial temperature distributions
- Designed and assembled an instrumentation enclosure to house data acquisition hardware for thermocouples and RTDs used in a Collins Aerospace burner characterization program

Aero-Design & Analysis - Kestrel UAV Program | Georgia Tech Supersonics Club

Aug 2025 – Present

- Sized horizontal and vertical stabilizers to achieve desired static margin and stability for a 6-ft fuselage, 5.4-ft wingspan UAV.
- Generated aerodynamic stability derivative matrices using AVL to support GNC modeling while evaluating lift distribution, downwash, and control effectiveness
- Optimized and iterated the outer mold line to balance lift, drag, and static margin for final CAD and control-surface design.
- Performed STAR-CCM+ CFD on the vertical stabilizer using an anisotropic mesh, running parametric sweeps across Mach number and angle of attack to assess aerodynamic performance.
- Collaborating with multidisciplinary teams across Propulsions, Structures, and GNC to design and build UAVs.

Military Transport Conceptual Design - Aircraft Design | Georgia Tech

Jan 2026 – Present

- Designed a 950,000-lb MTOW strategic military transport aircraft by performing mission sizing, weight regression, and drag polar analysis in MATLAB and Excel, achieving an estimated L/D of 23
- Performed aircraft constraint analysis (W/S vs T/W) for takeoff, cruise, climb, and landing requirements, selecting a design point of 110 psf wing loading and 0.32 thrust-to-weight ratio
- Modeled and evaluated 5 aircraft configurations in OpenVSP and AVL, sizing horizontal and vertical tails using volume coefficient methods to select the baseline configuration

Inlet and Gas Turbine Engine Design Project - Jet and Rocket Propulsion | Georgia Tech

Nov 2025 – Dec 2025

- Designed and analyzed a supersonic inlet and single-cycle gas turbine using MATLAB, applying compressible flow relations, shock theory, and thermodynamic cycle analysis.
- Ran parametric sweeps over compressor/fan pressure ratio, bypass ratio, and fuel-air ratio to meet thrust, TSFC targets, and total pressure recovery to select a baseline cycle for both ground roll and high-altitude cruise.
- Improved inlet efficiency by 8% while maintaining turbine temperature limits across mission segments

Wind Tunnel Testing and Data Acquisition - Aerospace Lab | Georgia Tech

May 2025 – Aug 2025

- Conducted subsonic wind tunnel experiments measuring aerodynamic forces using a 6-component load cell.
- Applied calibration, sampling theory, and Fourier analysis to validate data accuracy and identify error sources
- Generated drag polar figures, lift/drag analysis, and quality checks that informed error bounds and reliability.

PROFESSIONAL EXPERIENCE | INTERESTS

Newrizons Academy - SAT and AP STEM Subject Tutor | Lawrenceville, GA

Jan 2021 – Present

- Tutored 40+ high school students one-on-one in SAT Math and AP STEM subjects (Calculus, Physics, and Chemistry)
- Developed customized lesson plans and practice problems tailored to each student's learning style and academic needs, particularly addressing language barriers and cultural nuances to enhance comprehension and confidence

Interests: Weight Lifting, Basketball, Movies, Travel, Cooking