Who Kang

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Education

University of Washington Seattle, WA

Bachelor of Science in Aeronautics & Astronautics, Minor in Informatics *Aug 2025 – Jun 2027*

Certified FAA Airframe & Powerplant (A&P) Mechanic

Summary of Qualifications

- Aerospace Systems Engineer specializing in UAV development, flight control systems, and aerospace structures, with a proven track record in prototyping and multidisciplinary research.
- Expertise in engineering analysis and embedded systems, utilizing Python, MATLAB, C++, SolidWorks, and Arduino for flight hardware integration
- Certified FAA Airframe & Powerplant (A&P) Mechanic with hands-on proficiency in aircraft manufacturing processes and flight readiness verification

Experience

G3MS Lab, University of Washington Seattle, WA

Undergraduate Research Assistant (Prof. Avin Vijay) *March 2026 – Present*

- Engineered a machine learning-based detection framework to identify pre-cure automated fiber placement defects, specifically addressing overlaps, twisting, and tow misalignment.
- Developed recycled polymer feedstocks into conductive filaments for additive manufacturing by optimizing extrusion-based workflows
- Executed undergraduate research in automated fiber placement and advanced manufacturing to enhance defect detection in composite layups

Projects

Multimodal EMG-Controlled FPV Drone | *Python, Raspberry Pi, Arduino* Jan 2026 – Present

- Built an FPV drone testbed for a hands-free EMG-based UAV control project, including assembly, wiring, and avionics integration
- Configured the flight controller in Betaflight, including receiver inputs, motor mapping, ESC protocols, and failsafe settings
- Performed flight readiness checks and troubleshooting for power integrity, signal routing, and Raspberry Pi/Arduino integration

K-Capstone Challenge *(Consulate General of the Republic of Korea in Seattle)* Dec 2025 – Mar 2026

- Developed a quantitative index model using Need, Demand, Acceptance, and Concern to evaluate autonomous security robots
- Reviewed literature and frameworks such as UTAUT to support a multi-criteria evaluation model
- Automated preprocessing and weighted scoring for 100+ respondents using Python (Pandas) and MATLAB

Design, Build, Fly (DBF) Project | *SolidWorks* Aug 2024 – May 2025

- Designed an RC aircraft by estimating aerodynamic parameters including lift and drag
- Integrated avionics and propulsion components while applying A&P knowledge to support flight readiness and weight and balance
- Supported fabrication and assembly using SolidWorks and hands-on manufacturing processes

International Rocket Engineering Competition (IREC) | *OpenRocket, MATLAB* May 2024 – June 2024

- Estimated center of gravity and center of pressure across payload, recovery, and motor configurations
- Simulated apogee sensitivity to mass distribution changes using MATLAB and OpenRocket
- Fabricated and assembled hardware including a Delrin nose cone and PVC airframe

Technical Skills

Certification: FAA Airframe & Powerplant (A&P)
Programming/Analysis: Python, C/C++, MATLAB, Simulink
Embedded/CAD: Raspberry Pi, Arduino, Betaflight, SolidWorks, Fusion 360, Onshape