Sungjin Park

● holiday618@gmail.com ● https://park307.github.io/

Aerospace Engineering MS candidate at UIUC. Hands-on experience designing satellite-tracking ground stations and tuning real-time servo control systems using MATLAB/Simulink, Speedgoat, and PLCs to achieve stable dynamic response in high-speed applications. Seeking engineering roles in aerospace systems.

EDUCATION

University of Illinois at Urbana-Champaign **January 2025 - Present**
Masters of Science in Aerospace Engineering GPA: 3.77 /4.00

University of Illinois at Urbana-Champaign **August 2018 - May 2022**
Bachelor of Science in Aerospace Engineering GPA: 3.59 /4.00

WORK EXPERIENCE

Space LiinTech, South Korea **August 2025 - December 2025**
Platform Development Division Intern,

- Designed and prototyped a satellite-tracking ground station using Yagi antennas and 3D-printed components; implemented a motorized azimuth-elevation system with stepper motors and bearings to track satellites in sun-synchronous orbit (SSO).
- Developed embedded software in Arduino/C++ for real-time antenna pointing control and satellite pass prediction; integrating orbital data for automated tracking
- Debugged and optimized servo motor performance in real-time feedback control system by iteratively adjusting PLC parameters.
- Integrated MATLAB/Simulink with Speedgoat real-time hardware to configure a high-speed displacement sensor for a drop-tower system.

Space LiinTech, South Korea **May 2025 - August 2025**
Business Development Intern,

- Conducted market research and competitive analysis for space-based biopharmaceutical platforms to support strategic partnerships and investor outreach.
- Prepared marketing materials, presentations, and proposals for international collaborations.
- Assisted in event participation and stakeholder engagement to promote company technologies and build industry networks.

Raytheon Company, Tucson AZ **November 2022 - September 2024**
Sustainment Engineer Support - Missile Programs,

- Supported missile systems sustainment through component assessments

PROJECTS

Spacecraft Attitude Control with Star Tracker **Spring 2023**

- Linearized rotational dynamics and star tracker sensor model; verified controllability/observability and designed stable LQR controller/observer for fixed orientation under debris disturbances.

Quadrotor Drone Trajectory Tracking **Spring 2023**

- Linearized 6-DOF quadrotor dynamics and designed controller/observer for ring-racing path following, incorporating noisy sensors and actuator limits.

SKILLS

Controls & Simulation : MATLAB/Simulink, Speedgoat Real-Time Hardware, PLC Programming, Feedback Control Systems
Programming & Numerical Methods : Python, C++ (Data Structures)
CAD / FEA / CFD : SolidWorks, NX, ANSYS Fluent, Abaqus
Hardware & Integration : 3D Printing, Sensor Integration (Displacement, Noise Mitigation), Stepper/Servo Motors
Language : English, Korean