

## Junhyung Park

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<https://junhyungpark1821.github.io>  
 (334) 306-9672, junhyung1821@gmail.com

### EDUCATION

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*UNITED STATES AIR FORCE ACADEMY* – USAFA, CO 2021-Present  
 Major: Electrical and Computer Engineering  
 Minor: Spanish  
 GPA: 3.95 / Major’s GPA: 4.00

### SKILLS AND WORKING KNOWLEDGE

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Eagle PCB	Python	C++	JavaScript	MATLAB
Fusion 360	ROS	Git	Circuit Design	Web Dev

### RELATED COURSEWORK

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Introduction to Robotics System	Digital Design and Computer Architecture
Electric Power	Probability and Statistics for Engineers
Differential Eqns with Circuit Applications	Principles of Electronic Cyber Warfare

### PATENT IN WORK

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*“Blockchain-Powered Platform for Personal Record Proof”* (2022-Present, Dr. Barry Fagin – USAFA):

- Developed an application that securely verifies job applicants' credentials, experiences, and certifications in a form of a token using blockchain technology.
- Placed 3rd in Chainapsis Blockchain track at 2022 Junction Asia Hackathon.

### RESEARCH

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*“An Arduino Feedback Architecture for Monitoring and Controlling DC Power Source”* (2022-Present, Dr. John Ciezki – USAFA):

- Tested the limitations of Arduino for a DC power feedback control infrastructure.

*“LoRaWAN Transmission from Weather Balloon”* (2022, Dr. Matthew Mcharg – USAFA):

- Established LoRaWAN transmission system for location data between the payload and Internet of Things network.
- Developed a PHP webpage with data fetched from the Internet of Things Network using MQTT protocol to view and permanently store the data.

### PROFESSIONAL EXPERIENCE

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*Tactical Power Generation Specialist for Ohio Army National Guard* (2020-2021):

- Diagnosed unit’s power plants, diesel generators, and internal combustion engines in a field and sustainment level maintenance.

*Software Engineer at TalkMeUp* (2020-2021):

- Enhanced customer experience by modifying the interface to be more user-friendly.

- Automated administration jobs by incorporating new functions within the AI communication coach service.
- Expanded the customer base by implementing the service in the SCORM interface and launching the service on AWS Marketplace.

*Software Engineer at Appdiction Studio (2019):*

- Centralized Air Force's daily military incident reports for Maxwell Air Force Base with an Angular application.
- Quantified, analyzed, and trained NASDAQ stock data provided by the US Dept of Homeland Security to sort the US companies into different levels of Market Cap.

## **SOFTWARE DESIGN SPRINTS**

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*"Aquatic Data Analysis Module" (2019-2020):*

- Developed a low-cost device that evaluates the color components of the water sample.
- Incorporated with the Cleveland Water Alliance to manufacture and distribute A.D.A.M for promoting citizen science and researching harmful algal blooms at Lake Erie.
- Awarded 1st Place at Cleveland Give Back Hackathon.

*"Smart Light Windows" (2019):*

- Presented "Smart Light" that automatically adjusts the light brightness based on the incoming sunlight from outside.
- Awarded Social Impact, Making, and Presentation Awards at Case Western Reserve University Welcome Back Hackathon.

## **EXTRACURRICULAR ACTIVITIES**

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*Sim to Balloon to Orbit Initiative Mentor Lead (2022-Present, Dr. Cannady – OV4C):*

- Organized STEM learning opportunities for Peruvian students by sharing expertise in weather balloons.
- Coordinated with USAFA organizations and aerospace organizations in other universities to recruit student mentors.

*USAFA Innovation Actualizer (2022-Present, MSgt Steven Lazarowitz – USAFA):*

- Developed a reminder system for military duty shifts using Microsoft Power Automate; improved the mission accomplishment rate by 87%; Falcon Tank 2023 Finalist.
- Pitched an idea to integrate Internet of Things infrastructure within the dormitory laundromats to make cadet's laundry process more efficient; Falcon Tank 2022 Finalist.

*Blue Horizon Rocketry Club (2021-Present, Maj David Hensley – USAFA):*

- Integrated camera, motor, and radio subsystems of the payload to record flight data, detect the landing of the rocket, position with motors, perform radio communication, and take photographs of the surroundings to simulate rovers on another planet (2023).
- Designed rocket payload and ground station for collecting 9-axis data, estimating the landing position, and transmitting the estimation to the ground station (2022).