Junhyung Park

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EDUCATION

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

CASE WESTERN RESERVE UNIVERSITY – Cleveland, OH 2019-2020
Major: Computer Engineering
GPA: 3.91

SKILLS AND WORKING KNOWLEDGE

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

RELATED COURSEWORK

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

"Blockchain-Powered Platform for Personal Record Proof" (2022-Present):

- Team "GeNovation" developed an application, called "Rio," 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

"An Arduino Feedback Architecture for Monitoring and Controlling DC Power Source" (2022-Present):

- Developed a DC power feedback control infrastructure with Arduino for voltage control based on different power needs.

"LoRaWAN Transmission from Weather Balloon" (2022):

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

PROFESSIONAL EXPERIENCE

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.

Full Stack Developer 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 SCORM and launching the service on AWS Marketplace.

Software Engineer at Appddiction 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 United States Department of Homeland Security to sort the United States companies into different levels of Market Cap.

SOFTWARE DESIGN SPRINTS

"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 Eerie.
- Awarded 1st Place at Cleveland GiveBackHackathon.

"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 WelcomeBack Hackathon.

EXTRACURRICULAR ACTIVITIES

Sim to Balloon to Orbit Initiative Mentor Lead (2022-Present):
- Organized STEM learning opportunities for Peruvian students by sharing expertise in weather balloons.
- Coordinated with USAFA organizations and Space Force organizations in other universities to recruit mentors.

USAFA Innovation Actualizer (2022-Present):
- Pitched and 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):
- Integrated camera, motor, and radio subsystems of the payload to record flight data, detect the landing of the rocket, position itself with motors, perform APRS 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).