JOSHUA YOUNGGIL CHANG

Bachelor of Science in Electrical and Computer Engineering

(919)-592-5373 | robin6205@gmail.com | joshua-chang-40 | robin6205

EDUCATION

Purdue University   May 2022
Bachelor of Science in Electrical and Computer Engineering   West Lafayette, IN
- Relevant Coursework: Intro to Artificial Intelligence, Object Oriented programming, Data structures and Algorithm, Advanced python for data science, Network Security, Microprocessor systems and interfacing, Linear circuit analytics, Digital circuit Design, Linear Algebra, Calculus

WORK EXPERIENCE

Drone SWARMS Research Purdue University | https://www.swarmsim.io/   West Lafayette, IN
Research Team Lead / Obstacle avoidance software engineer   2021 Aug- Present
- Developed obstacle avoidance algorithm for flight system used in a group of multiple quadcopters
- Designed flight simulations with unreal engine environment for anti-collision algorithm testing
- Evaluated various navigation and mapping methods with Lidar data for sustainable autonomous flight paths
- Received VIP Leadership Award, Interdisciplinary Research Presentation Award, and UAV Research Award

Hewlett Packard Enterprise SPOCK   Houston, TX
DevOps Software Automation engineer intern   2020 May – 2021 May
- Developed automation scripts for the DevOps process of the SPOCK web application
- Managed the Github repository of the developers overlooking release updates and backups
- Conducted build and releases for each web application updates to development and production servers
- Implemented a Graphical User Interface to make the automation process more intuitive and efficient

CAM2 AI Research Purdue University   West Lafayette, IN
Forest Inventory Analysis AI software engineer   2019 Jan- May
- Developed image recognition and processing algorithms that calculate and analyze forestry data by its size, species, shape, and other parameters.
- Implemented the intel Realsense SDK to collect data and develop the object detection software
- Surveyed commercial forest to evaluate the current economic value of that region
- Presented results with team and instructors at the Undergraduate research conference

ECMINER – Data Analytics   Seoul, KO
Machine learning software engineer intern   2019 May – Aug
- Developed flight safety prediction algorithms for air force applications on the Big data analysis software
- Produced reports of analyzed data acquired by clients/companies
- Implemented regression algorithms to the Big data analytics software
- Conducted presentations for the newly developed software and algorithms

PERSONAL PROJECTS & EVENTS

Blockchain Voting Web App – Hack NC   2021 Chapel Hill, NC
UNC Chapel Hill hackathon event
- Designed a secure online voting web app integrated with block chain technology
- Developed the backend Blockchain algorithm in JavaScript and implemented the voting system on the web through Node JS

LEADERSHIP & ACTIVITIES

Purdue UNICEF Organization(Secretary)	2017-2018
Purdue ACM – AI Special interest group	2017-2019
Fencing Club	2017-2018
BoilerMake Hackathon	2018-2022

SKILLS & INTERESTS

Technical Skills	C, Python, Java, C++, Assembly, MATLAB, Verilog, Unix/Linux, Shell, JavaScript, Git, AutoCAD, Flask/Django, Node JS, circuit analysis
Language	Fluent in English and Korean, Conversational Proficiency in French
Interests	Automation, Neural Network design, Cinematography, Photography, Music Production