(PAUL) YI WON CHUNG

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RESEARCH INTERESTS

Cybersecurity, Operating Systems, Artificial Intelligence, Machine Learning, Networking, Cloud Computing, Cryptography

EDUCATION

University of Wisconsin-Madison (Madison, WI) 2020 ~ Present
B.S. Student in Computer Sciences, Honors Candidate in Liberal Arts GPA: 4.0/4.0

Neung-In High School (Daegu, Republic of Korea) 2017 ~ 2020
High School Degree in STEM
Vice President of Class of 2020 Student Council

POSITIONS

UW-Madison Cybersecurity Operations Center (Madison, WI) 2020.10 ~
Cybersecurity Intern Analyst

Cybersecurity UW (Madison, WI) 2020.09 ~
Club Member

Indie Hackers Forum (Daegu, Republic of Korea) 2016 ~ 2020
Team Lead & Cybersecurity Advisor

Anti-root (Busan, Republic of Korea) 2017 ~ 2019
Cybersecurity System Researcher

Igloo Security (Seoul, Republic of Korea) 2019.08
Production Incident Response Intern

PROJECTS

Node.js Full-stack Web Application
HackMIT, 2021, Hackathon

- Designed a RESTful Backend API model and implemented it via Express
- Implemented a simple front-end web interface with EJS and integrated it to the backend
- Stored the user and post data in PostgreSQL
- Deployed resulting web app “FoodSurfers”, similar with the AirBnB platform

Zero-day Vulnerability Analysis and Exploitation
CISC-W', 2019, Research

- Collaboratively analyzed the risk factor of CVE-2019-0708 (Bluekeep) RDP vulnerability on traditional embedded systems
- Designed a Python PoC script that enables to acquire administrative control of the vulnerable system by sending target-specific payloads
- Poster presented as the primary author at the conference

Voice-based Interactive Chatbot
Neung-In Scholarly Awards, 2018, Research

- Used Django of Python to design a script-based school information chatbot server
- Used Beautifulsoup4 library to parse lunch and timeline information from school web
- Connected the API to Google Dialogflow Chatbot platform
- Deployed the project on Digitalocean instance and serviced it via Google Assistant

Neural Implanted Robotic Arms
Kyungpook National University R&E Program, 2018, Research

- Analyzed the current progress on the neural implant technology
- Wrote a script using Python and Raspberry Pi to emulate and determine the rooms for improvement in current robotic arms to increase the similarity with human body parts.

Efficiency of Deploying VDI in Public-School Systems of Korea
Neung-In Scholarly Awards, 2017, Research

- Analyzed the efficiency of implementing Virtual Desktop Infrastructure in Korean public-school systems

PUBLICATIONS

[1] **Yi Won Chung**, Tae Gyeom Heo. Exploitation of RDP Bluekeep on Embedded Systems and Possible Mitigations. *Proceedings of the Conference on Information Security and Cryptography-Winter, 2019.*

HONORS AND AWARDS

- 5th Place, Korea Ministry of Education CTF (Team 대구대총장지망생신진우), 2019
- Best Research Award, Neung-In Scholarly Awards, 2018
- 2nd Place, Kyungpook National University R&E Competition, 2017
- Student of the Year, Korea Ministry of Education Infosec Institute, 2016 - 2019
- Outstanding Academic Achievement, Korean National Honors Society TFT, 2017 – 2019
- Annual Community Service Awards, DOVOL Community Service, 2016 - 2019