PAUL NAM

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EDUCATION

University of Washington **Sep. 2020 – Aug. 2022**
B.S. Electrical Engineering

PROJECTS

Smart Asthma Inhaler II (Capstone Project) **Dec 2021 – June 2022**

- Designed a custom Printed Circuit Board (PCB) and circuit schematic for a Smart Pin; a prospective device used to help detect harmful particles around an individual and process multiple data via sensors.
- Analyzed the Android application that collects data from the Smart Pin and Inhaler using the Bluetooth LE.
- Collaborated on this project with Computer Engineering and Mechanical Engineering students.
- Presented the work at the American Society for Engineering Education (ASEE) conference.

Privacy-Preserving Image Processing for IoT (Undergraduate Research) **Aug 2021 – June 2022**

- Applied homomorphic encryption to multi-level image thresholding for IoT applications.
- Proposed a small circuit depth multi-level thresholding algorithm in the homomorphic encryption domain.
- Used the Microsoft Simple Encrypted Arithmetic Library (SEAL) and a UNIX programming environment.
- One academic paper using the results submitted to an international conference in June 2022.

My Weather Info (Cloud Computing) **Dec 2022**

- Built a simple website that takes city name or zip code as input and provide information of city weather, temperature, zip code, and country code.
- Designed the website using HTML, CSS, EJS, Bootstrap, Node.js and Express.js, and deployed the website.
- Understood the concept of RESTful by implementing OpenWeatherMap API.

Design Auto Range Ohmmeter (Course Project) **Jan 2022 – Mar 2022**

- Designed a PCB and circuit schematic for an auto range ohmmeter.
- Used the Arduino IDE to design the software.

WORK EXPERIENCE

Qualitel – Electrical Test Engineer **Aug 2022 – Nov 2022**

- Assisted senior engineer to create a test fixture program using LabView by referencing Python3 code.
- Designed test framework components, such as user interface, process models, and step types.
- Created test sequences within the framework.
- Troubleshooted and experimented problems with tests running in a production setting.

LEADERSHIP

University of Washington – Project Coordinator of the Smart Asthma Inhaler II Team **Dec 2021 – June 2022**

- Delegated project members with various tasks to accomplish and finalize the project goals.
- Generated a Gantt chart to appoint tasks and plans for the team.
- Prepared meeting times, minutes, and agendas for each mandatory meeting.
- Coordinated between different departments and advisors within the same project team to advance the project vision via collecting feedback and offering suggestions.

PUBLICATION

Paul Nam and Sunwoong Kim, "Small Circuit Depth Multilevel Thresholding for a Homomorphically Encrypted Image," to be submitted to IEEE International Workshop on Multimedia Signal Processing (MMSP) 2022

RELEVANT SKILLS

Programming Languages: C/C++, Python, JavaScript, Java, Arduino, HTML, CSS, EJS
Technologies / Tools: Bootstrap, jQuery, Git/GitHub, Heroku, Vercel, LabView, MatLab, Unix, OpenCV, Microsoft Simple Encrypted Arithmetic Library (SEAL), Verilog, Intel Quartus Prime
Languages: English (professional working proficiency), Korean (native proficiency), Japanese (limited working proficiency)

REFERENCE

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