# 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.

**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**

- Learning to create a test fixture program using LabView by referencing Python3 code
- Troubleshot one of the leading production lines and secured more than $2 Million dollars revenue
- Designed test framework components, such as user interface, process models, and step types
- Created test sequences within the framework

## 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**: JavaScript, TypeScript, Python, Java, C/C++, Arduino, Solidity, HTML, CSS, SCSS
**Framework/Libraries:** NextJs, ReactJs, NodeJs, ExpressJs, Bootstrap, Tailwind, Openai API, Google API, Firebase, OpenCV, SEAL
**Technologies / Tools:** MandoDB, NPM, Yarn, Unix, Linux, VScode, Figma, LabView, MatLab, Unix, OpenCV, Verilog, Intel Quartus Prime, EasyEDA
**Languages**
English (professional working proficiency), Korean (native proficiency), Japanese (limited working proficiency)

## REFERENCE

Dr. Sunwoong Sunny Kim
Assistant Professor at University of Washington
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