SEONKWON KIM

Daejeon, Korea
(82) 10-3151-6243
godmakessky@gmail.com
https://seonkwonkim.github.io

Application for admission

Bachelor of Science in Engineering (Computer Science / Electronics Engineering)
Master of Science (Cyber Security: Software Security)

TECHNICAL SKILLS

Programming Languages: Intermediate: C, Java, C++, Python, Dart, Go

Computer Skills: Intermediate: Microsoft office, Arduino, FPGA, Web framework Spring, Java EE8, Flutter, Android, Web framework Django

PROJECT EXPERIENCE

- **Product Design Project: A bus application using voice recognition technology for blind people**
  (Handong Global University, July 2017 – Sept. 2017)
  - Part of a 3-member team with a professor advisor, to develop a product to address the needs of Pohang city residents who are blind.
  - Utilized Android by Java and researched GPI technology and Open API as a programmer.
- **Business Design Project for an IT Start-up in China**
  (University of International Business and Economics; Beijing, China, July 2017 – Aug. 2017)
  - Team Lead for a 5-member team who developed a business project for an IT start-up business in China.
  - Won 1st Place in the contest hosted by Cheil Pengtai Corporation.
  - Utilized Oven, an online prototyping tool.
- **Arduino Design Project: A device to show on a screen display about seats in a library**
  (Handong Global University, Aug. 2017 – Dec. 2017)
  - Used Arduino by Sketch with PIR sensors and servomotors to detect whether people sit in a library chair or not.
- **FPGA Design Project: A shooting game with I/O devices**
  (Handong Global University, Aug. 2018 – Dec. 2018)
  - Used Nexys DDR 4 board by Verilog with a computer monitor, a speaker and a PS2 Keyboard to play the game.
- **Industry and Academy Capstone Design Project: A enterprise web solution**
  (Handong Global University, Feb. 2019 – Dec. 2019)
  - Team Lead for a 2-member team with a professor advisor and a company president, to develop a web-based international track and field tournament system.
  - Utilized Java EE 8 and responded to multi-view and internationalization dynamically.
- **Industry and Academy Research Cooperation Project: A dynamic web solution based on GUI**
  (Handong Global University, Feb. 2019 – Dec. 2019)
  - Team Lead for a 2-member team with a professor advisor and a company president, to develop a dynamic web solution system based on GUI.
- **A Grocery Purchasing System Using RFID Technology for Blind People**
  (Handong Global University, Jan. 2020 – Jun. 2020)
  - Team Lead for a 3-member team with a professor advisor, to research human-computer interaction.
  - Utilized Flutter, RFID technology, and UI/UX for developing a mobile application.

- **KU-Smart Mask Project**
  (Graduate School of Korea University, Mar. 2021 – Aug. 2021)
  - Team Lead for a 3-member team in the development of healthcare masks designed to measure the content of bad breath.
  - Won 4th Place in the contest hosted by Korea University Tech Fair for 2022
- **Development of Technology for the Security and Ultra-high-speed Integrity of the Next-generation Internal Network of Autonomous Vehicles**
  (Graduate School of Korea University, Mar. 2021 – Dec. 2022)
  - researched AI-based autonomous vehicles internal network security threat prediction and analysis technology.
- **Development of Security Service Technology Using Side-channel Information**
  (Graduate School of Korea University, Mar. 2021 – Jan. 2023)
  - designed of a side-channel information measurement environment collected by PC systems.
- **Development of Source Code Obfuscation and Decryption Technology**
  (Graduate School of Korea University, Aug. 2021 – Feb. 2023)
  - developed a novel source code obfuscation technique.

WORK EXPERIENCE

- **Application Developer, Peoplespace Global Internship**
  (Irvine, CA, Dec. 2017 – Feb. 2018)
  - Worked 45 hours per week, building a standalone web app to analyze eye-tracking data by OpenCV and Image processing.
- **Web Developer, Doreiku Co. Internship**
  (Osaka, Japan, Dec. 2018 – Jan. 2019)
  - Worked 45 hours per week, developing an enterprise web solution with Spring web framework.
- **Researcher, KAIST SE LAB Internship**
  (Daejeon, Korea, Jun. 2019 – Aug. 2019)
  - Worked 45 hours per week, researching System of Systems goal modeling and developing the simulation program for interactive functions.
- **Application Developer, Physiocue, Inc.**
  (San Jose, CA, Dec. 2019 – Feb. 2020)
  - Worked 45 hours per week, developing a mobile application to check users' migraine information and suggest health advice for users.
- **Researcher, KAIST CPS LAB Internship**
  (Daejeon, Korea, July. 2020 – Sept. 2020)
  - Worked 45 hours per week, researching web system security and authentication for industrial robots.
- **Researcher, DUDU IT, Inc.**
  (Seoul, Korea, Dec. 2020 – Feb. 2021)
  - Worked 45 hours per week, researching cyber security contents related to CTF and Smart Home IoT Security Living Lab with Korea Internet & Security Agency (KISA).
- **Teaching Assistant, Korea University Institute of Data Science**
  (Seoul, Korea, Sep. 2021 – Feb. 2023)
  - Worked 65 hours per month, assisting professors and supporting the enhancement of the learning experience for graduate school students.
  - Participated in courses such as Principles and Applications of Deep Learning, Data Science and Artificial Intelligence Programming, and Principles and Applications of Machine Learning.

- **Resident Assistant, Korea University Anam Dormitory**
  (Seoul, Korea, Apr. 2021 – Feb. 2022)
  - Worked 45 hours, fostering an inclusive living environment, and helping enforce residence hall policies.
- **Camp Instructor, Korea University Center for Gifted Education**
  (Seoul, Korea, Jan. 2023 – Feb. 2023)
  - Worked 48 hours, teaching basic software programming and artificial intelligence to students ranging from elementary to high school levels.

VOLUNTEER EXPERIENCE

- **Member, SeeSeon Academy**
  (Handong Global University, Mar. – Sept. 2017)
  - developed IT solutions for the disabled; served on the team for the visually impaired.
- **Member, ISEL S-Lab**
  (Handong Global University, Feb. – Jun. 2018)
  - researched Software Engineering; served on the team for researching a source code analyzer.
  - Laboratory Leader
- **Member, SW Education Pro bono**
  (Handong Global University, Feb. – Jun. 2018)
  - Educated middle school students on coding; served on the team for teaching App Inventor.
  - Won an excellence award for software education.

Publications

- **DROPSYS: Detection of ROP Attacks Using System Information**
  Seon Kwon Kim, Dong Hoon Lee
  Master's thesis, Graduate School of Korea University, 2023.
- **Data Pointer Integrity Protection Technique Using ARM Pointer Authentication**
  Hongjoo Jin, Jiwon Lee, Seon Kwon Kim, Dong Hoon Lee
  Korea Information and Communications Society Winter Conference, 2022.
- **A New Dynamic Control Flow Obfuscation Using Dummy Condition**
  Jiwon Lee, Hongjoo Jin, Seon Kwon Kim, Kijoong Kim, Dong Hoon Lee
  Conference on Information Security and Cryptography Summer, 2022.
- **Design and Implementation of a Control-flow Attack Detection Method Using System Side Channel Information**
  Seon Kwon Kim, Hongjoo Jin, Jiwon Lee, Dong Hoon Lee
  Conference on Information Security and Cryptography Summer, 2021.
- **Design and Implementation of Exception Handler Dedicated to Backward-edge Control-flow Integrity for Security and Compatibility**
  Hongjoo Jin, Seon Kwon Kim, Dong Hoon Lee
  Conference on Information Security and Cryptography Summer, 2021.

EDUCATION

Handong Global University, Pohang, South Korea
Bachelor of Science in Engineering (Computer Science / Electronics Engineering)
Graduation: February 2021
Honors: cum laude
Graduate School, Korea University, Seoul, South Korea
Master of Science in Cyber Security (Software Security)
Graduation: February 2023