

Jiyun Kim

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EDUCATION

Karlsruhe Institute of Technology, Karlsruhe, Germany Oct. 2020 – Sep. 2024
Master of Science (M.Sc) in Electrical Technology and Information Technology (ETIT)
Specialized in Information and Communication

German Aerospace Center (DLR), Munich, Germany Oct. 2023 – Apr.2024
Thesis : Data Acquisition of Atmospherically Induced Optical Signal Fluctuations

- **Developed** a versatile, **high-precision, stand-alone data acquisition system** for **Communication and Navigation Institute (KN) of the DLR** to facilitate advanced research in **near-ground optical communication** by enabling in-depth studies of atmospheric effects on optical signal transmission.
- **Conducted comprehensive experiments under varying atmospheric conditions** at the DLR campus to collect extensive optical signal data.
- **Analyzed collected data** to identify correlations between atmospheric parameters and signal fluctuations.
- **Contributed to improving optical communication performance** by applying transmitter diversity, achieving a **50% reduction in scintillation index**

Ewha University, Seoul, Korea Mar. 2015 – Feb.2020
Bachelor of Science (B.Sc) in Electronics Engineering

WORK EXPERIENCE

EDI GmbH, Karlsruhe, Germany | **Software Developer, Automation Tester** Nov. 2020 – Sep.2022

- **Developed** Selenium Python integration tests, **achieving 97% bug-free stability** in AI-based data analysis applications.
- **Accelerated** bug-fixing process by **25%** through the implementation of unit tests based on a comprehensive test case table.
- **Streamlined** intern onboarding by **developing** a Docker environment management script, **reducing** setup time by **30%**.

Bob shop Radsportversand GmbH, Wiesloch, Germany | **Shopware Developer** May. 2020 – Sep.2020

- Implemented a multi-selectable dynamic filter function within the E-commerce platform, resulting in a **5-star Customer Satisfaction Score (CSAT)** from 300 customers in the first month
- **Optimized the user accessibility** across PC, tablet, and smartphone by customizing SCSS style library of the E-commerce platform

EDI GmbH, Karlsruhe, Germany | **Software Development Intern, Frontend Developer** Mar. 2018 – Apr.2020

- **Increased the frontend development productivity** by implementing React.js frontend library of standard components of data analysis services
- **Accelerated compilation time** for AI-generated visualizations by utilizing SVG components and HTTP request functions.

SKILLS

Programming Languages: C +, C ++, MATLAB, , Python, Verilog, PHP, SQL
Web Development: JavaScript, React.js, jQuery, HTML, CSS, Git, MySQL, Selenium
Development Tools: Git, VirtualBox, Docker
Circuit Design: Cadence Virtuoso, ADS(Advanced Design System)
Languages: Korean (Native), English (C1), German (B1)

PROJECTS

MMIC circuit design: Designed MMIC transceiver for the SHF band utilizing Cadence circuit design tools (4 team members)
FPGA system design: Developed a Verilog-coded game with a state machine for user interaction with switches and displays (2 team members)
Digital Image Processing: Implemented a MATLAB algorithm for image defect detection and restoration (integrated by Samsung)
Line Tracer design: Developed a line tracer robot utilizing Atmega hardware and software

AWARDS

Design Thinking Hackathon (3rd Place) – Korea Univ., SK telecom Jan. 2017
Creative Innovation Competition Camp (4th Place) – Korea Univ. Innovation Center Jul. 2016

ACTIVITIES

Tutoring for Drone Programming – ELTEC College of Engineering EWha Jan. 2018
Tutoring Physics for Freshman students – ELTEC College of Engineering EWha 2nd semester. 2017
Seoul Motor Show Reporter – Seoul Motor Show 1st semester. 2017
Tutoring for Computer Programming – E.E.I (Ewha Electronic Innovation) July. 2016 – Aug.2016