# Doheon Kim

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## Education

**University of California, San Diego** Sep 2021 - Present
*B.S. in Computer Science, Minor in Business* *San Diego, CA*

## Work Experience

**Tutor** March 2022 - Present
*UCSD CSE* *San Diego, CA*

- Led instructional sessions for undergraduate courses in Mechanics, Calculus, Algorithms and Analysis
- Leveraged online tools such as Zoom, and google jamboards to facilitate interactive and effective learning environments for remote students
- Designed and implemented innovative teaching activities, empowering students to develop independent problem-solving skills

**Analyst Intern** June 2023 - August 2023
*K2 Investment* *Seoul, South Korea*

- Conducted comprehensive market and financial analysis on potential investments in the AI, Quantum Computing, Serial Database technology sectors
- Assisted in the creation and delivery of persuasive presentations to secure funding from Telecommunication groups, significantly contributing to the negotiation process
- Actively participated in high-stakes company meetings orivudubg critical insights on Investor Relations and synthesizing complex research findings on Healthcare companies for strategic planning

**Software Engineering Intern** June 2022 - August 2022
*Acelab* *Seoul, Korea*

- Engineered a user-friendly Object Detection Tool GUI using PyQT, significantly enhancing user interface and usability for diverse clients
- Developed advanced python methods to extract and interpret object data from Mobileye Lidar sensors facilitating accurate data analysis through ROSbag file integration
- Pioneered a quantitative analysis framework for object data, generating lateral and longitudinal error bars through interpolation techniques, improving data accuracy and reliability

## Projects

**YouLostIT - Airtag** | *C, STM32cube, BLE device, Interrupts* Sep 2023 - Dec 2023

- Implement a BLE-based tracking device leveraging C and STM32cube, significantly optimizing power consumption through use of GPIO Interrupts and the STM HAL library
- Engineered I2C communication protocols to interface with accelerometers, enabling precise movement detection and enhancing device responsiveness
- Integrate Bluetooth Low Energy for communication with the youlostit app, facilitating real-time tracking and user interaction

**Google Local Reviews Recommender Systems** | *Python, Jupyter, Machine Learning Models* Sep 2023 - Dec 2023

- Authored a comprehensive study on the application of machine learning models for recommendations systems, using meta-data from the Google Local Dataset in Alabama
- Employed advanced data representation techniques to visualize user interactions and preferences
- Developed and validated several predictive models including latent factor, linear regression, and Jaccard similarity, achieving significant improvements in mean squared error metrics

**Bluetooth Scanner** | *Python, C, Arduino, SQL* March 2023 - June 2023

- Developed Bluetooth-based people density mapping system at UCSD Rimac Gym, with RESTful API function and applying trilateration in python to visualize crowd density over time

**Machine Learning** | *Neural Networks, Coordinate Descent* Winter 2024

- Authored a research paper on the application of Machine Learning on Optimization and Neural Networks using Greedy Coordinate Descent and Fast Gradient sign method