Hye Won (Nicole) Hwang

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Self-motivated and proactive prospective data scientist with project experience in machine learning and mobile application development. **Creative and versatile** individual with excellent problem-solving skills utilizing data science. Diversified skills in **analysing and organizing data, adapting in fast- paced environment, and contributing to positive team morale.**

EXPERIENCE

HONDA R&D **Remote**
Data Science Consultant *Oct 2022-Current*

- Developing a cost prediction model using machine learning techniques to forecast future costs and optimize budget planning.
- Liaising with 4 data science students, 2 MBA students, ZealStrat consulting, and Honda R&D to develop a machine learning model that can be implemented to make data driven decision.

PROPWAVE **Seoul, South Korea**
Data Science Intern *April 2022–May 2022*

- Assisted in developing image-based empty parking slot detection code in Python using CV2 (OpenCV) library to identify empty parking spaces in real-time video streams from cameras installed in a parking lot.
- Implemented image preprocessing techniques (e.g. filtering, thresholding) to enhance the contrast and clarity of the input images and improve the accuracy of the detection algorithm
- Tested and evaluated the performance of the empty parking slot detection code using metrics such as accuracy, precision, and recall

YONSEI UNIVERSITY **Seoul, South Korea**
Graduate Research and Teaching Assistant *Sept 2019–Aug 2021*

- Designed, modeled, and experimented research on bioactive peptides.
- Utilized R to preprocess, cluster and visualize genome and peptide data.
- Published research paper as first author at JAFC (IF 5.279).
- Procured research grant from Amore Pacific Co.

PROJECT

Nutri-AI *Feb 2022 – Apr 2023*
Flutter-based food image detection application for logging meals and recommending iHerb supplements. (www.github.com/Nutri-AI)

- participated in end-to-end development from…
  1. creating database schema and utilizing AWS DynamoDB/ S3,
  2. building backend API using FastAPI,
  3. training image detection model with Yolov3,
  4. deploying model using ONNX/ ONNX runtime,
  5. deploying service using docker and EC2,
  6. developing Flutter mobile application.

Project received 1st place in the SK Planet's data science bootcamp.

EDUCATION

NORTHWESTERN UNIVERSITY — **Evanston, IL**
Master of Science in Analytics — *Sept 2022 – Dec 2023*

YONSEI UNIVERSITY — **Seoul, South Korea**
Master of Science in Bio-industrial Engineering — *Sept 2019 – Aug 2021*
Lab. of Food and Biosystems Engineering

YONSEI UNIVERSITY — **Seoul, South Korea**
Bachelor of Science in Biotechnology — *Mar 2015 – Aug 2019*

ADDITIONAL SKILLS

- Python (TensorFlow, Fast-API)
- JavaScript (Node JS, EJS)
- Dart (Flutter)
- SQL (MySQL)
- AWS (DynamoDB, S3, EC2)
- Git (GitHub)
- HTML/CSS

PUBLICATIONS

Lee, Ji-Young, **Hwang H.W.** et al. (2022) "A Genomics-Based Semirational Approach for Expanding the Postbiotic Potential of Collagen Peptides Using Lactobacillaceae." *Journal of Agricultural and Food Chemistry*.

Hwang, H. W., & Lee, D. W. (2019). Prebiotics: An overview of current researches and industrial applications. Food Science and Industry, 52(3), 241-260.

LANGUAGES

Korean: fluent
English: fluent, TOEFL 117/120