

JunTae Park

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Military Service: Fulfilled

EDUCATION

Mar.2019 ~ Feb.2023 B.S. Hanyang University ERICA - Department of Electrical Engineering

Mar.2023 ~ Present M.S. Gwangju Institute of Science and Technology

RESEARCH INTEREST

With the growing threat of antibiotic-resistant bacteria, we need antimicrobial peptides with more novel and desired properties. Antimicrobial peptides (AMPs) are small peptides of 10-50 amino acids that kill bacteria by inhibiting their activity or penetrating cell membranes. However, producing and identifying AMPs is time consuming and expensive. Therefore, I am interested in using deep learning to generate AMPs with desired properties.

HONORS AND AWARDS

Spring semester of 2020 Scholarship for Academic Excellence, Department of Electrical Engineering

Fall semester of 2022 Scholarship for Academic Excellence, Department of Electrical Engineering

RESEARCH EXPERIENCES

Dec.2020 ~ Feb.2021 Organic Electronics and Nanophotonics Lab.

Seoul National University, Department of Intelligence and Information

- Training Deep Neural Networks for the Inverse Design of Nanophotonic Structures.

Calculated Transmission/Reflection spectrum of multilayer using Scattering matrix for the optimal thickness of the material. By using the calculated value as ground truth, Backward DNN and Forward DNN are created. So that when only the layer refractive index is given input, a model can be created to calculate the optimal thickness.

Sep.2021~Jun.2022 Graduation Project

- Convenience store product recognizer for the visually impaired

Through the ETRI Speech to Text API, the name of the item you want to buy becomes the input in the form of a voice. Category and Location recognition of an item are implemented in two stages. As a result, when the item is detected, the item name is output as voice. In addition, it used the Google API to perform OCR of receipts so that users could know if they purchased the goods properly.

RESEARCH EXPERIENCES

Jun.2022~Jun.2023

Laboratory of Intelligent Things

Hanyang University ERICA, Department of Electrical Engineering

- Natural Language Inference for Medical Examination Data

We are conducting research to create an artificial intelligence model that can answer questions in the questionnaire by inputting conversation data between doctors and patients. I'm working on a processing method that can preprocess data and classify mislabeled data using questionnaire data. In addition, we proceed with the process of de-identifying personal information based on the trained model.

QUALIFICATION

English

TOEIC (805)

EXTRA ACTIVITIES

- AI competition

한국지질자원연구원 “2023 지질자원 데이터 활용 및 인공지능 경진대회” (2023.06.05~2023.07.05) 장려상 수상

Dacon “제1회 신약개발 AI 경진대회” (2023.08.07~2023.09.25) 3위 한국화학연구원 원장상 수상