Hodong Lee

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EDUCATION

Korea University	Seoul, KR
M.S. in Computer Science	2022–Current

Sogang University	Seoul, KR
B.S. in Convergence Software, Triple major in Business Administration & Mass Communication	2011–2018

WORK EXPERIENCE

NLP Engineer, Visually-rich Document Understanding	Seoul, KR
Cognitive AI Group, SAMSUNG SDS	Nov 2021–Current

NLP Engineer, Conversation model development	Seoul, KR
In-house venture "XEEDLAB", SAMSUNG SDS	Mar 2021–Oct 2021

Data Scientist, Text mining in Manufacturing	Seoul, KR
Intelligent Factory, SAMSUNG SDS	Jul 2018–Feb 2021

Data Scientist, Extracurricular activities recommendation	San Jose, CA
Headstart	Summer 2017

PROJECTS

Multi-turn conversation model development — Mar 2021–Oct 2021

Construct Korean dialogue dataset and implemented BlenderBot
- Research on comparing seq2seq models and decoder-only models for conditional generation
- Dataset construction with lower cost using machine translation

Equipment troubleshooting guidance system (Samsung Display) — Oct 2019–Feb 2021

Designed and implemented NLP pipeline for recommendation system
- Sentence relation prediction using Sentence BERT
- Contextualized classification using Hierarchical Attention Network

Manufacturing document management system (Samsung Electronics) — Jul 2018–Sep 2019

Developed search engine to manage engineering log and extract topic map from document
- Data ETL and ElasticSearch add-on development
- Extractive summarization, topic extraction and similar documents search

Research Experience

Co-Researcher, Natural Language Processing Lab, Korea University Seoul, KR
- Implemented BlenderBot for Korean Dialogues with Prof. Heuiseok Lim Mar 2021–Oct 2021

Research Intern, Kangbuk Samsung Hospital Seoul, KR
- Applied cycle GAN variant models for medical image translation Summer 2018

Research Assistant, Sogang University Seoul, KR
- Analyzed student activity data and designed an extracurricular activities roadmap 2015–2018

Research Interests

Deep learning based NLP
- Dialogue System
- Visual Document Understanding
- Information Retrieval

Publications

[1] Hodong Lee, Jongmin Lee, Yoonna Jang, Jaehyung Seo, Heuiseok Lim, "Study on Multi-turn Response Generation with Information Retrieval and Korean Generative Model", *Korea Convergence Society (KCS)*, 2021, (Under Review).

Skills

- **Samsung Software Competency Test** ('Professional' level)
- **Deep Learning model development** (Pytorch & Tensorflow/Keras)
- **Design of NLP dataset and service pipeline**
- **Building of RESTful microservices** (Django & FastApi)
- **EDA & Data visualization** (Python & R)
- **Proficient in** SQL, Elasticsearch, JAVA

Teaching

- **Teaching Assistant** at Keras Korea Winter 2019
  Prepared and taught materials in NLP pipeline development using TensorFlow/Keras
- **Teaching Assistant** at Sogang University 2016–2018
  Course Name (Computational Thinking)

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Prof. Yoondong Lee
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