Hodong Lee

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EDUCATION

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)

References

Prof. Heuiseok Lim
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Prof. Yoondong Lee
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Prof. Ji Seon Lee
Adjunct Professor, Dept. of Computer Science, Mt. San Antonio College
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