

SANGHYUK CHOI

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<https://choisanghy.uk>

RESEARCH INTERESTS

Natural Language Processing, Machine Learning

LLM(Instruction fine-tuning, Alignment tuning), Natural Language Generation(Data-to-text, Summarization), Deep Neural Networks

WORK EXPERIENCE

NAVER Cloud

Research Engineer

Seoul, Korea

Sep 2024 - now

NCSOFT

Application LM Team Lead

Generation Model Team Lead

Research Engineer

Seoul, Korea

Sep 2023 - Aug 2024

Jun 2022 - Jan 2024

Jan 2018 - Aug 2024

Stayes Inc.

CTO, Co-founder

Seoul, Korea

Feb 2014 - Feb 2015

Visionaries Inc.

CTO, Co-founder

Seoul, Korea

Mar 2013 - Feb 2014

RESEARCH EXPERIENCE

OffsetBias: Leveraging Debiased Data for Tuning Evaluators

2024

- Building an LLM Evaluator(LLM-as-a-judge) that is robust to biases.

VARCO LLM 2.0: NCSOFT's Foundation Model

2024

- Iterative alignment tuning (RLHF, RLAIIF) from the instruct-tuned model

VARCO Text: NCSOFT's AI Writing Assistant

2023 - 2024

- Instruct fine-tuning and alignment tuning from the foundation LLM

AI Weather-Forecast News Article Generation (with Yonhap News Agency)

2019 - 2024

- Building a generative AI model which specialized on writing weather-forecasting news

Developing In-house Generative AI-model-training Framework

2018 - 2024

- Developing an automated (data preprocess - train - serve) ML training framework which targets no coding but just preparing the config-file for LLM Training (fine-tuning, alignment)

Baseball Game Summary Generation from the game log

2018 - 2022

- Developing AI model generates baseball game summary from the game log
- Deploying an ML model for serving in a real-time application

Deep Research on Pointer Generator (Copy) Networks

2020 - 2021

- Performance enhancement of Pointer Generator network reducing hallucinations

Developing a Korean Word2vec Model

2016 - 2017

- Developing and publishing of word2vec model trained with large Korean corpus
- Research on syllable-level model leveraging Korean morphological characteristics

A Quote Recommender System

2015 - 2016

- Algorithm for evaluating recommended quote of AI dialog system

EDUCATION

Seoul National University

M.S. in Computer Science and Engineering

Supervised by Prof. Sang-goo Lee

Thesis: The Modeling and Training Methods for Syllable-based Korean Word Embeddings

Seoul, Korea

Mar 2015 - Feb 2017

Korea University

B.S. in Department of Computer Science and Engineering (1st Major)

Software Technology and Enterprise Program for Unlimited Potential (Relation Major)

Seoul, Korea

Mar 2011 - Feb 2015

PUBLICATIONS

Junsoo Park, Seungyeon Jwa, Meiying Ren, Daeyoung Kim, **Sanghyuk Choi***. OffsetBias: Leveraging Debiased Data for Tuning Evaluators. EMNLP2024 Findings, 2024. (*Corresponding Author)

Sanghyuk Choi, Jeong-in Hwang, Hyungjong Noh, Yeonsoo Lee. May the Force Be with Your Copy Mechanism: Enhanced Supervised-Copy Method for Natural Language Generation. arXiv preprint, 2021.

Sanghyuk Choi, Taeuk Kim, Jinseok Seol, Sang-goo Lee. A Syllable-based Technique for Word Embeddings of Korean Words. SCLeM2017(The 1st Workshop on Subword and Character level models in NLP, EMNLP2017).

Sanghyuk Choi, Jinseok Seol, Sang-goo Lee. On Word Embedding Models and Parameters Optimized for Korean. The 28th Annual Conference on Human & Cognitive Language Technology.

Sanghyuk Choi, Sang-goo Lee. On the Implementation of an Input and Management System for Korean Minsokak(Folk Music) Fieldwork Material Database. Studies in Korean Music(Vol.59).

AWARDS

Software Olympiad, Korea University **2nd Prize**

2012

ACM-ICPC Asia Daejeon Regional **4th Prize**

2012

ACM-ICPC Asia Daejeon Regional **9th Prize**

2013

OPEN SOURCE

Contributor of OpenNMT-py: Open-Source Neural Machine Translation and (Large) Language Models

Contributor of PEFT: State-of-the-art Parameter-Efficient Fine-Tuning (PEFT) methods, Huggingface

TEACHING EXPERIENCE

TA of Digital Computer Concept and Practice @ Seoul National University

Spring, 2015

TA of Digital Computer Concept and Practice @ Seoul National University

Spring, 2016

LANGUAGES

English(Fluent), and Korean(Native)

TECHNICAL SKILLS

Advanced

Python, Pytorch, Pytorch-lightning, Deepspeed, Huggingface, Tensorflow, C, C++, Java, JavaScript, SQL, and Git

Intermediate

C#, Hadoop, and MATLAB