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# Research Interests\_

I am currently a Ph.D candidate in the Department of Computer Science and Engineering at Korea University (Advisor: Heuiseok Lim). I am a co-founder and CTO of KU-NMT Group. I have published more than 50 papers in the field of Natural Language Processing, Computer Science, and applied for 4 patents.

- Natural Language Processing
- Artificial Intelligence
- · Commonsense Reasoning
- · Hallucination in NLP
- · Knowledge Editing
- · Natural Language Generation
- · Language Resource and Evaluation
- · Language Modeling
- Neural Machine Translation
- Data Management and Engineering
- · Semantic Search and Information Retrieval

# **Education**

**Korea University** Seoul, South Korea

Ph.D candidate in Computer Science and Engineering, (GPA: 4.47 / 4.5) Sep. 2020 - Aug. 2025

- · Advisor: Heuiseok Lim
- · Natural Language Processing & Artificial Intelligence Lab
- Co-Founder and CTO of KU-NMT Group.

**Korea University** Seoul, South Korea

B.A. IN ENGLISH LANGUAGE AND LITERATURE & BUSINESS SCHOOL, (GPA: 4.19 / 4.5)

· Advisor: Donguk Kim

Mar. 2014 - Exp. Aug. 2020

# **Academic Services**

**Organizing Collaborator** Singapore

ICLR - SSNLP 2025 WORKSHOP Jan - May. 2025

In collaboration with A\*STAR Research

**Selected Publications** 

Reviewer OpenReview

ACL / EMNLP / NAACL / ICLR Jan - Oct. 2024 • Language Resource and Evaluation & Bayesian & Language Generation & Large Language Model

Reviewer OpenReview

ACL / EMNLP Jan - Dec. 2023

• Language Resource and Evaluation & Multilingual & Language Generation

# K-HALU: Multiple Answer Korean Hallucination Benchmark for Large Language Models Jaehyung Seo, Heuiseok Lim

ICLR 2025 - The Thirteenth International Conference on Learning Representations

# CoME: An Unlearning-based Approach to Conflict-free Model Editing

Dahyun Jung, Jaehyung Seo, Jaewook Lee, Chanjun Park, Heuiseok Lim

NAACL 2025 - Proceedings of the North American Chapter of the Association for Computational Linguistics

JAEHYUNG, SEO · CURRICULUM VITAE

#### Find the Intention of Instruction: Comprehensive Evaluation of Instruction Understanding for Large Language Models

Hyeonseok Moon, Jaehyung Seo, Seungyoon Lee, Chanjun Park, Heuiseok Lim

NAACL 2025 - Findings of the North American Chapter of the Association for Computational Linguistics

#### An analysis on language transfer of pre-trained language model with cross-lingual post-training

Suhyune Son, Chanjun Park, Jungseob Lee, Midan Shim, Chanhee Lee, Yoonna Jang, **Jaehyung Seo**, Jungwoo Lim, Heuiseok Lim ESWA 2025 - Experts Systems with Application

#### KNOTICED: Augmentative and Alternative Communication Software for Language Developmental Disabilities

Sugyeong Eo, Jungwoo Lim, Chanjun Park, Hyeonseok Moon, Jaehyung Seo, Heuiseok Lim

LREC-COLING 2024 - The Joint International Conference on Computational Linguistics, Language Resources and Evaluation

# Intelligent Predictive Maintenance RAG framework for Power Plants: Enhancing QA with StyleDFS and Domain Specific Instruction Tuning

Seongtae Hong, Joong Min Shin, **Jaehyung Seo**, Taemin Lee, Jeongbae Park, Cho Man Young, Byeongho Choi, Heuiseok Lim *EMNLP 2024 - Proceedings of the 2024 Conference on Empirical Methods in Natural Language Processing: Industry Track* 

#### KoCommonGEN v2: A Benchmark for Navigating Korean Commonsense Reasoning Challenges in Large Language Models

Jaehyung Seo, Jaewook Lee, Chanjun Park, SeongTae Hong, Seungjun Lee, Heuiseok Lim

ACL 2024 - Findings of the Annual Meeting of the Association for Computational Linguistics

### Post-negation Text Induce New Hallucinations in Large Language Models

Jaehyung Seo, Aram So, Heuiseok Lim

[Best Paper] HCLT 2024 - Annual Conference on Human and Language Technology

#### Length-aware Byte Pair Encoding for Mitigating Over-segmentation in Korean Machine Translation

Jungseob Lee, Hyeonseok Moon, Seungjun Lee Chanjun Park, Sugyeong Eo, Hyunwoong Ko, **Jaehyung Seo**, Seungyoon Lee, Heuiseok Lim

ACL 2024 - Findings of the Annual Meeting of the Association for Computational Linguistics

#### Leveraging Pre-existing Resources for Data-Efficient Counter-Narrative Generation in Korean

Seungyoon Lee, Chanjun Park, DaHyun Jung, Hyeonseok Moon, Jaehyung Seo, Sugyeong Eo, Heuiseok Lim

LREC-COLING 2024 - The Joint International Conference on Computational Linguistics, Language Resources and Evaluation

#### Generative Interpretation: Toward Human-Like Evaluation for Educational Question-Answer Pair Generation

Hyeonseok Moon, Jaewook Lee, Sugyeong Eo, Chanjun Park, **Jaehyung Seo**, Heuiseok Lim EACL 2024 - Findings of the Association for Computational Linguistics

#### Hyper-BTS Dataset: Scalability and Enhanced Analysis of Back TranScription (BTS) for ASR Post-Processing

Chanjun Park, **Jaehyung Seo**, Seolhwa Lee, Junyoung Son, Hyeonseok Moon, Sugyeong Eo, Chanhee Lee, Heuiseok Lim EACL 2024 - Findings of the Association for Computational Linquistics

#### CReTIHC: Designing Causal Reasoning Tasks about Temporal Interventions and Hallucinated Confoundings

Changwoo Chun, SongEun Lee, Jaehyung Seo, Heui-Seok Lim

EMNLP 2023 - Findings of the Association for Computational Linguistics

# CHEF in the Language Kitchen: A Generative Data Augmentation Leveraging Korean Morpheme Ingredients

Jaehyung Seo, Hyeonseok Moon, Jaewook Lee, Sugyeong Eo, Chanjun Park, Heuiseok Lim

EMNLP 2023 - Proceedings of the Conference on Empirical Methods in Natural Language Processing

#### Informative Evidence-guided Prompt-based Fine-tuning for English-Korean Critical Error Detection

Dahyun Jung, Sugyeong Eo, Chanjun Park, Hyeonseok Moon, Jaehyung Seo, Heui-Seok Lim

IJCNLP-AACL 2023 - Proceedings of the 13th International Joint Conference on Natural Language Processing and the 3rd Conference of the Asia-Pacific Chapter of the Association for Computational Linguistics

### **Knowledge Graph-Augmented Korean Generative Commonsense Reasoning**

Dahyun Jung, Jaehyung Seo, Jaewook Lee, Chanjun Park, Heuiseok Lim

ICML-DMLR workshop (2023)

# KEBAP: Korean Error Explainable Benchmark Dataset for ASR and Post-processing

Seonmin Koo, Chanjun Park, Jinsung Kim, **Jaehyung Seo**, Sugyeong Eo, Hyeonseok Moon, Heui-Seok Lim *EMNLP 2023 - Proceedings of the Conference on Empirical Methods in Natural Language Processing* 

#### Uncovering the Risks and Drawbacks Associated with the Use of Synthetic Data for Grammatical Error Correction

Seonmin Koo, Chanjun Park, Seolhwa Lee, **Jaehyung Seo**, Sugyeong Eo, Hyeonseok Moon, Heuiseok Lim *IEEE Access* (2023). IEEE

# PEEP-Talk: A Situational Dialogue-based Chatbot for English Education

Seungjun Lee, Yoonna Jang, Chanjun Park, Jungseob Lee, **Jaehyung Seo**, Hyeonseok Moon, Sugyeong Eo, Seounghoon Lee, Bernardo Yahya, Heui-Seok Lim

ACL 2023 - Proceedings of the 61st Annual Meeting of the Association for Computational Linguistics (Volume 3: System Demonstrations)

# A Survey on Evaluation Metrics for Machine Translation

Seungjun Lee, Jungseob Lee, Hyeonseok Moon, Chanjun Park, **Jaehyung Seo**, Sugyeong Eo, Seonmin Koo, Heuiseok Lim *Mathematics* 11.4 (2023) p. 1006. MDPI

# Doubts on the reliability of parallel corpus filtering

Hyeonseok Moon, Chanjun Park, Seonmin Koo, Jungseob Lee, Seungjun Lee, **Jaehyung Seo**, Sugyeong Eo, Yoonna Jang, Hyunjoong Kim, Hyoung-gyu Lee

Expert Systems with Applications 233 (2023) p. 120962. Elsevier

#### Synthetic Alone: Exploring the Dark Side of Synthetic Data for Grammatical Error Correction

Chanjun Park, Seonmin Koo, Seolhwa Lee, Jaehyung Seo, Sugyeong Eo, Hyeonseok Moon, Heuiseok Lim

#### QUAK: A Synthetic Quality Estimation Dataset for Korean-English Neural Machine Translation

Sugyeong Eo, Chanjun Park, Hyeonseok Moon, **Jaehyung Seo**, Gyeongmin Kim, Jungseob Lee, Heui-Seok Lim

COLING 2022 - Proceedings of the 29th International Conference on Computational Linguistics

#### Word-level Quality Estimation for Korean-English Neural Machine Translation

Sugyeong Eo, Chanjun Park, Hyeonseok Moon, **Jaehyung Seo**, Heuiseok Lim *IEEE Access* 10 (2022) pp. 44964–44973. IEEE

#### A Dog Is Passing Over The Jet? A Text-Generation Dataset for Korean Commonsense Reasoning and Evaluation

**Jaehyung Seo**, Seounghoon Lee, Chanjun Park, Yoonna Jang, Hyeonseok Moon, Sugyeong Eo, Seonmin Koo, Heuiseok Lim *NAACL 2022 - Findings of the Association for Computational Linguistics*, Seattle, United States

#### Dense-to-Question and Sparse-to-Answer: Hybrid Retriever System for Industrial Frequently Asked Questions

Jaehyung Seo, Taemin Lee, Hyeonseok Moon, Chanjun Park, Sugyeong Eo, Imatitikua D Aiyanyo, Kinam Park, Aram So, Sungmin Ahn, Jeongbae Park

Mathematics 10.8 (2022) p. 1335. MDPI

#### Plain Template Insertion: Korean-Prompt-Based Engineering for Few-Shot Learners

**Jaehyung Seo**, Hyeonseok Moon, Chanhee Lee, Sugyeong Eo, Chanjun Park, Jihoon Kim, Changwoo Chun, Heuiseok Lim *IEEE Access* 10 (2022) pp. 107587–107597

# PU-GEN: Enhancing generative commonsense reasoning for language models with human-centered knowledge

**Jaehyung Seo**, Dongsuk Oh, Sugyeong Eo, Chanjun Park, Kisu Yang, Hyeonseok Moon, Kinam Park, Heuiseok Lim *Knowledge-Based Systems* (2022) p. 109861. Elsevier

#### Research on Utilization Strategy of User Engagements in Korean Fake News Detection

Myunghoon Kang, **Jaehyung Seo**, Chanjun Park, Heuiseok Lim

IEEE Access (2022) pp. 1-1

#### K-NCT: Korean Neural Grammatical Error Correction Gold-Standard Test Set Using Novel Error Type Classification Criteria

Seonmin Koo, Chanjun Park, **Jaehyung Seo**, Seungjun Lee, Hyeonseok Moon, Jungseob Lee, Heuiseok Lim *IEEE Access* (2022). IEEE

# BERTOEIC: Solving TOEIC Problems Using Simple and Efficient Data Augmentation Techniques with Pretrained Transformer Encoders

Jeongwoo Lee, Hyeonseok Moon, Chanjun Park, **Jaehyung Seo**, Sugyeong Eo, Heuiseok Lim *Applied Sciences* 12.13 (2022) p. 6686. Multidisciplinary Digital Publishing Institute

#### Return on Advertising Spend Prediction with Task Decomposition-Based LSTM Model

Hyeonseok Moon, Taemin Lee, **Jaehyung Seo**, Chanjun Park, Sugyeong Eo, Imatitikua D Aiyanyo, Jeongbae Park, Aram So, Kyoungwha Ok, Kinam Park

Mathematics 10.10 (2022) p. 1637. MDPI

#### A Self-Supervised Automatic Post-Editing Data Generation Tool

Hyeonseok Moon, Chanjun Park, Sugyeong Eo, **Jaehyung Seo**, SeungJun Lee, Heuiseok Lim ICML 2022 - DataPerf workshop (2022)

#### An Automatic Post Editing with Efficient and Simple Data Generation Method

Hyeonseok Moon, Chanjun Park, **Jaehyung Seo**, Sugyeong Eo, Heuiseok Lim *IEEE Access* (2022). IEEE

# **Empirical Analysis of Noising Scheme based Synthetic Data Generation for Automatic Post-editing**

Hyeonseok Moon, Chanjun Park, Seolhwa Lee, **Jaehyung Seo**, Jungseob Lee, Sugyeong Eo, Heuiseok Lim LREC 2022 - Proceedings of the Language Resources and Evaluation Conference, Marseille, France

#### The ASR Post-Processor Performance Challenges of BackTranScription (BTS): Data-Centric and Model-Centric Approaches

Chanjun Park, **Jaehyung Seo**, Seolhwa Lee, Chanhee Lee, Heuiseok Lim *Mathematics* 10.19 (2022)

#### PicTalky: Augmentative and Alternative Communication Software for Language Developmental Disabilities

Chanjun Park, Yoonna Jang, Seolhwa Lee, Jaehyung Seo, Kisu Yang, Heuiseok Lim

 $IJCNLP-AACL\ 2022-The\ 2nd\ Conference\ of\ the\ Asia-Pacific\ Chapter\ of\ the\ Association\ for\ Computational\ Linguistics$ 

# **Priming Ancient Korean Neural Machine Translation**

Chanjun Park, Seolhwa Lee, **Jaehyung Seo**, Hyeonseok Moon, Sugyeong Eo, Heuiseok Lim LREC 2022 - Proceedings of the Language Resources and Evaluation Conference, Marseille, France

# **Empirical Analysis of Parallel Corpora and In-Depth Analysis Using LIWC**

Chanjun Park, Midan Shim, Sugyeong Eo, Seolhwa Lee, **Jaehyung Seo**, Hyeonseok Moon, Heuiseok Lim *Applied Sciences* 12.11 (2022) p. 5545. Multidisciplinary Digital Publishing Institute

#### A New Tool for Efficiently Generating Quality Estimation Datasets

Sugyeong Eo, Chanjun Park, **Jaehyung Seo**, Hyeonseok Moon, Heuiseok Lim NeurlPS 2021 - Data-centric Al (DCAI) workshop

# Comparative Analysis of Current Approaches to Quality Estimation for Neural Machine Translation

Sugyeong Eo, Chanjun Park, Hyeonseok Moon, Jaehyung Seo, Heuiseok Lim

Applied Sciences 11.14 (2021) p. 6584. Multidisciplinary Digital Publishing Institute

# **Dealing with the Paradox of Quality Estimation**

Sugyeong Eo, Chanjun Park, Hyeonseok Moon, Jaehyung Seo, Heuiseok Lim

MT Summit - Proceedings of the 4th Workshop on Technologies for MT of Low Resource Languages (LoResMT2021), Virtual

#### **Automatic Knowledge Augmentation for Generative Commonsense Reasoning**

Jaehyung Seo, Chanjun Park, Sugyeong Eo, Hyeonseok Moon, Heuiseok Lim

NeurIPS 2021 - Data-centric AI (DCAI) workshop

#### Grounded Vocabulary for Image Retrieval Using a Modified Multi-Generator Generative Adversarial Network

Kuekyeng Kim, Chanjun Park, Jaehyung Seo, Heuiseok Lim

IEEE Access (2021), IEEE

#### An Empirical Study on Automatic Post Editing for Neural Machine Translation

Hyeonseok Moon, Chanjun Park, Sugyeong Eo, Jaehyung Seo, Heuiseok Lim IEEE Access 9 (2021) pp. 123754–123763. IEEE

## BTS: Back TranScription for Speech-to-Text Post-Processor using Text-to-Speech-to-Text

Chanjun Park, Jaehyung Seo, Seolhwa Lee, Chanhee Lee, Hyeonseok Moon, Sugyeong Eo, Heuiseok Lim ACL 2021 - Proceedings of the 8th Workshop on Asian Translation (WAT2021), Online

#### How should human translation coexist with NMT? Efficient tool for building high quality parallel corpus

Chanjun Park, Seolhwa Lee, Hyeonseok Moon, Sugyeong Eo, Jaehyung Seo, Heuiseok Lim

NeurIPS 2021 - Data-centric AI (DCAI) workshop (2021)

# **Honors & Awards**

2024.10	<b>The Grand Paper Award, 2024</b> , The 36th Annual Conference on Human & Cognitive Language Technology	South Korea
2023.10	<b>Outstanding Paper Award, 2023,</b> The 35th Annual Conference on Human & Cognitive Language Technology	South Korea
2022.12	NAVER PH.D Fellowship Award, 2022, Scholarship Award	South Korea
2022.12	<b>1st place in WMT 2022 QE Task 3, 2022</b> , WMT 2022 - EMNLP 2022	Abu Dhabi
2022.10	<b>Outstanding Paper Award, 2022,</b> The 34th Annual Conference on Human & Cognitive Language Technology	South Korea
2021.10	<b>Outstanding Paper Award, 2021,</b> The 33rd Annual Conference on Human & Cognitive Language Technology	South Korea
2021.07	4th Place in CommonGen 1.1 Leaderboard, 2021, CommonGen 1.1 Leaderboard	World Record

# Selected Research Experience

#### **Research in Commonsense Reasoning**

Seoul South Korea

**KOREA UNIVERSITY** June. 2021. - Present

- KoCommonGEN v2: A Benchmark for Navigating Korean Commonsense Reasoning Challenges in Large Language Models
- · CHEF in the Language Kitchen: A Generative Data Augmentation Leveraging Korean Morpheme Ingredients
- CReTIHC: Designing Causal Reasoning Tasks about Temporal Interventions and Hallucinated Confoundings
- Knowledge Graph-Augmented Korean Generative Commonsense Reasoning
- SRLev-BIH: An Evaluation Metric for Korean Generative Commonsense Reasoning
- Ko-ATOMIC: Korean Commonsense Knowledge Graph
- KommonGen: A Dataset for Korean Generative Commonsense Reasoning Evaluation
- Automatic Knowledge Augmentation for Generative Commonsense Reasoning
- Publication of research paper in ACL-findings 2024: https://aclanthology.org/2024.findings-acl.141/
- Publication of research paper in EMNLP 2023: https://aclanthology.org/2023.emnlp-main.367/
- Publication of research paper in EMNLP-findings 2023: https://aclanthology.org/2023.findings-emnlp.693/
- Publication of research paper in NAACL-findings 2022: https://aclanthology.org/2022.findings-naacl.172/
- Publication of research paper in Knowledge-Based Systems 2022: https://doi.org/10.1016/j.knosys.2022.109861
- · Skills: Commonsense Reasoning, Pytorch, Huggingface

#### (Project) KT - Legal Knowledge Editing

Seoul, South Korea

April. 2024. - May. 2025

PROJECT MANAGER AT KOREA UNIV Supported by KT

- Skills: Large language model, Knowledge Editing, Legal NLP, Retrieval-augmented
- Under-review: KoLEG

#### (Project) Next-Generation AI Technology Development - Hallucination

Seoul South Korea

Jan. 2024. - Dec. 2026

· Supported by IITP

PROJECT MANAGER AT KOREA UNIV

- Skills: Large language model, Hallucination detection/mitigation
- K-HALU: Multiple Answer Korean Hallucination Benchmark for Large Language Models
- The Grand Paper Award: Post-negation Text Induce New Hallucinations in Large Language Models
- Publication of research paper in ICLR 2025: https://openreview.net/forum?id=VnLhUogHYE

# (Project) Large Language Modeling for Special Technical Documents

Seoul, South Korea Dec. 2023. - June. 2024

PROJECT MANAGER AT KOREA UNIV

- · Supported by GAON
- Skills: Large language modeling, RAG
- Publication of research paper in EMNLP 2024 (Industry Track): https://aclanthology.org/2024.emnlp-industry.61/

#### (Project) Open Ko-LLM Leaderboard

Seoul. South Korea

RESEARCHER AT KOREA UNIV Sep. 2023. - Dec. 2023

- · Supported by Upstage
- KoCommonGEN v2: A Benchmark for Navigating Korean Commonsense Reasoning Challenges in Large Language Models
- Publication of research paper in ACL-findings 2024: https://aclanthology.org/2024.findings-acl.141/
- Skills: Large language model, Commonsense Reasoning, Evaluation

#### (Project) UI/UX Artificial Intelligence Service Development

Seoul, South Korea

June. 2023. - Feb. 2024.

RESEARCHER AT KOREA UNIV

- Supported by Samsung Fire & Marine Insurance
- Skills: Natural language generation, Large language modeling, App application

# (Project) R&D Voucher: AI Contact Center

Seoul, South Korea

June. 2022. - May. 2023.

RESEARCHER AT KOREA UNIV

Supported by O2O

Skills: Natural language processing, Pytorch, Huggingface

# (Project) Industry-Academia-Government Collaboration R&D: AI Interviewing

Seoul South Korea June. 2022. - May. 2023.

RESEARCHER AT KOREA UNIV

· Supported by Withmind

Skills: Natural language processing, Pytorch, Huggingface

#### **Research in Grammatical Error Correction**

Seoul South Korea

January. 2022. - Present

**KOREA UNIVERSITY** 

- Uncovering the Risks and Drawbacks Associated with the Use of Synthetic Data for Grammatical Error Correction
- Synthetic Alone: Exploring the Dark Side of Synthetic Data for Grammatical Error Correction
- · K-nct: Korean neural grammatical error correction gold-standard test set using novel error type classification criteria
- Publication of research paper in IEEE Access (SCIE): https://ieeexplore.ieee.org/abstract/document/9938990
- Publication of research paper in IEEE Access (SCIE): https://ieeexplore.ieee.org/abstract/document/10234394/
- Publication of research paper in ICML 2023 Workshop: https://arxiv.org/abs/2306.14377
- · Skills: Graph Neural Network, Pytorch, Fairseq

### (Project) Data Augmentation with Language Generation Research

Seoul, South Korea May. 2022. - April. 2023.

PROJECT MANAGER AT KOREA UNIV

· Supported by Samsung Research

· Skills: Data augmentation, Generation, Pytorch, Huggingface

# (Project) Korean-Prompt-based Engineering for Few-shot Research PROJECT MANAGER AT KOREA UNIV

Seoul, South Korea March. 2021. - April. 2022.

• Plain Template Insertion: Korean-Prompt-based Engineering for Few-shot Learners

- Supported by Hyundai Motor • Publication of research paper in IEEE Access (SCIE): https://ieeexplore.ieee.org/document/9913979
- Skills: Prompt learning, Few-shot learning, Pytorch, Huggingface

### (Project) Return on Advertising Spend (ROAS) Prediction Research

Seoul, South Korea

December. 2021. - March. 2022.

RESEARCHER AT KOREA UNIV

· Return on Advertising Spend (ROAS) refers to the ratio of revenue generated by advertising projects to its expense.

- We present a method for predicting ROAS that does not require controlled experiments in data acquisition and validates its effectiveness through comparative experiments. Specifically, we propose a task deposition method that divides the end-to-end prediction task into the two-stage process; occurrence prediction and occurred ROAS regression.
- · Supported by Data voucher
- Publication of research paper in Mathematics (SCIE): https://www.mdpi.com/2227-7390/10/10/1637
- · Skills: ROAS, Regression, Pytorch

# (Project) Hybrid Retriever System for Industrial Frequently Asked Questions Research

Seoul, South Korea

PROJECT MANAGER AT KOREA UNIV

December. 2021. - March. 2022.

- · We propose a method of returning responses to customer inquiries using only data that can be easily obtained from companies based on the deep learning information retrieval module. In this work, we hybridize dense embedding and sparse embedding to make it robust to professional terms and suggest new functions to scale the results returned by the two modules and adjust the weight ratio.
- Supported by Data voucher
- Publication of research paper in Mathematics (SCIE): https://www.mdpi.com/2227-7390/10/8/1335
- · Skills: Information Retrieval, Pytorch

#### **Research in Fake News Detection Research**

Seoul, South Korea

KOREA UNIVERSITY

January. 2022. - Present

- Research for Utilization Strategy of User Engagements in Korean Fake News Detection
- Publication of research paper in IEEE Access (SCIE): https://ieeexplore.ieee.org/document/9841541
- · Skills: Graph Nerual Network, Pytorch, Fairseq

JAEHYUNG, SEO · CURRICULUM VITAE

# (Project) NAVER PAPAGO - Parallel Corpus Filtering and Mining

Seoul. South Korea

RESEARCHER AT KOREA UNIV December, 2021. - June, 2022.

- Research for Static and Dynamic Parallel Corpus Filtering and Mining
- Human-inspired curriculum learning based NMT
- Publication of research paper in ESWA 2023 (SCIE): https://www.sciencedirect.com/science/article/pii/S0957417423014641
- Supported by NAVER PAPAGO
- Skills: Neural Machine Translation, Parallel corpus filtering, Pytorch, Fairseq

#### **Research in Data-centric Neural Machine Translation**

Seoul, South Korea

KOREA UNIVERSITY

KOREA UNIVERSITY

July. 2021. - December. 2023.

- · Length-aware Byte Pair Encoding for Mitigating Over-segmentation in Korean Machine Translation
- Doubts on the reliability of parallel corpus filtering
- Research for Data-centric Neural Machine Translation, Automatic Post Editing, Quality Estimation, Generative Commonsense Reasoning
- Develop Efficient tool for building high-quality parallel corpus and A New Tool for Efficiently Generating Quality Estimation Datasets and A Self-Supervised Automatic Post-Editing Data Generation Tool
- Publication of research paper in ESWA 2023: https://doi.org/10.1016/j.eswa.2023.120962
- Publication of 3 research papers in NeurIPS 2021 Data-centric AI (DCAI) workshop: https://eval.how/dcai2021/index.html
- Publication of research paper in ICML 2022 DataPerf workshop: https://sites.google.com/view/dataperf2022
- Skills: Neural Machine Translation, Web Application, Fairseq

#### **Research in Image Retrieval Research**

Seoul, South Korea

June. 2021. - September. 2021.

- · Grounded Vocabulary for Image Retrieval Using a Modified Multi-Generator Generative Adversarial Network
- Publication of research paper in IEEE Access (SCIE): https://ieeexplore.ieee.org/document/9585128
- · Skills: Image Retrieval, Pytorch, Huggingface

# (Project) Korean Multi-turn Response Chat-bot Research

Seoul, South Korea

May. 2021. - January. 2022.

PROJECT MANAGER AT KOREA UNIV

- Supported by Samsung SDS
- Publication of research paper in KCI 2022: https://doi.org/10.15207/JKCS.2022.13.01.013
- Skills: Dialogue System, Natural language generation, Pytorch, Huggingface

#### Research in Speech recognition post-processor Research

Seoul, South Korea

**KOREA UNIVERSITY** 

January. 2021. - Present

- · Proposed BackTranScription(BTS). Back Transcription (BTS) has seen limited success without the role of phonetic transcription for building and creating vast datasets automatically.
- · KEBAP: Korean Error Explainable Benchmark Dataset for ASR and Post-processing
- · Publication of research paper in EACL 2024
- Publication of research paper in EMNLP 2023: https://aclanthology.org/2023.emnlp-main.292/
- Publication of research paper in WAT 2021 (ACL Workshop): https://aclanthology.org/2021.wat-1.10/
- Publication of research paper in Mathematics: https://www.mdpi.com/2227-7390/10/19/3618
- Skills: Neural Machine Translation, Pytorch, Huggingface, Fairseq

# **Research in Automatic Post Editing Research**

Seoul, South Korea

**KOREA UNIVERSITY** 

**KOREA UNIVERSITY** 

January. 2021. - Present

- APE research based on Cross Lingual Pretrained Language Model
- Adpater-based APE research
- Publication of research paper in IEEE Access (SCIE): https://ieeexplore.ieee.org/document/9528385/
- Research for Efficient and Simple Data Generation Method Low Resource APE and Pseudo APE data generation
- Publication of research paper in IEEE Access (SCIE): https://ieeexplore.ieee.org/document/9714400
- Research for Synthetic Data Generation Using Noising Strategies for Automatic Post-editing
- Publication of research paper in LREC 2022: http://www.lrec-conf.org/proceedings/lrec2022/pdf/2022.lrec-1.93.pdf
- Skills: Neural Machine Translation, Pytorch, Automatic Post Editing, Huggingface, Fairseq

# **Research in Quality Estimation Research**

Seoul, South Korea

January. 2021. - Present

- Large Scale PLM based Quality Estimation development and research
- Low Resource QE and Pseudo QE data generation
- Publication of research paper in Applied Science (SCIE): https://www.mdpi.com/2076-3417/11/14/6584
- Publication of research paper in MT Summit 2021 LoresMT Workshop: https://aclanthology.org/2021.mtsummit-loresmt.1/
- Publication of research paper in IEEE Access: https://ieeexplore.ieee.org/document/9761258
- Publication of research paper in COLING 2022: https://aclanthology.org/2022.coling-1.460.pdf
- 1st place in WMT 2022 QE Task 3: KU X Upstage's submission for the WMT22 Quality Estimation: Critical Error Detection Shared Task
- · Skills: Neural Machine Translation, Pytorch, Quality Estimation, OpenKiwi, Huggingface, Fairseq

#### **Research in AI for Education Research**

Seoul. South Korea

KOREA University September. 2020. - Present

- PEEP-Talk: Deep Learning-based English Education Platform for Personalized Foreign Language Learning
- AI student: A Machine Reading Comprehension System for the Korean College Scholastic Ability Test
- BERTOEIC: Solving TOEIC Problems Using Simple and Efficient Data Augmentation Techniques with Pretrained Transformer Encoders
- Publication of research paper in ACL 2023 (Demo-track): https://aclanthology.org/2023.acl-demo.18/
- Publication of research paper in Mathematics (SCIE): https://www.mdpi.com/2227-7390/10/9/1486
- Publication of research paper in Applied Sciences (SCIE): https://www.mdpi.com/2076-3417/12/13/6686
- Skills: Pytorch, Python, Google Cloud Platform, REST API, Nao Toolkit

#### **Research in AI for Accessibility Research**

Seoul, South Korea

**KOREA UNIVERSITY** 

September. 2020. - Present

- · PicTalky: Design of augmentative alternative communication (AAC) software for children with developmental disabilities
- Publication of research paper in AACL 2022 Demo Track
- Skills: Pytorch, Python, Google Cloud Platform, REST API, Nao Toolkit

# (Project) A Study on the Improvement of Understanding of Korean-based Generative Models

Seoul, South Korea

July. 2020. - March. 2021

RESEARCHER AT KOREA UNIV

- Supported by National Security Research Institute
- Skills: Language modeling, Natural language generation

Skills\_

**Programming** Python

Machine Learning & Deep Learning Pytorch

**Natural Language Processing**Commonsense Reasoning, Knowledge Editing, Hallucination, Large Language Model **GPU server Build & Management**Linux configuration and engineering, NAS, MLOps, GPU parallelization, Networking, RAID

OS Linux, Ubuntu, MAC, Windows, Docker

Language Skills Korean, English

# **Patents**

	2023.12	DEVICE AND METHOD FOR KOREAN DATA AUGMENTATION BASED ON CONTRASTIVE LEARNING AND	South Korea
		MORPHEME COMBINATION, Patent Application (10-2023-0189496)	
	2023.10	APPARATUS AND METHOD FOR GENERATING LANGUAGE BASED ON COMMONSENSE REASONING,	South Korea
		Granted Patent (10-2593463)	
	2023.03	GENERATING METHOD OF MODEL MEASURING DOCUMENT SIMILARITY AND MEASURING METHOD FOR	South Korea
		<b>DOCUMENT SIMILARITY USING THE SAME, </b> Granted Patent (10-2507192)	
	2022.10	DEVICE AND METHOD FOR GENERATING KOREAN COMMONSENSE REASONING DATASET, Patent	South Korea
		Application (10-2022-0132373)	
	2021.11	APPARATUS OF OBTAINING RESPONSE BASED ON SEMANTIC SIMILARITY AND METHOD THEREOF,	South Korea
		Patent Application (10-2021-0156653)	

# **Invited Talk & Teaching Experience**

Dongguk University South Korea

Invited Advisor Jun. 2023

• Introduction to Natural Language Processing and Commonsense Reasoning

NongHyup Bank Co., Ltd South Korea

Invited Advisor Jul. 2020 - Sep. 2020

• Teaching data science for new employees

Korea University South Korea

TEACHING ASSISTANT Mar - Jun. 2023

• (DFE615-00) Natural Language Processing for Artificial Intelligence

Korea University South Korea

TEACHING ASSISTANT Sep - Dec. 2022

- (DFE610) Natural Language Processing for Digital Finance Engineering
- Lecture materials: https://github.com/nlpai-lab/nlp-bible-code

Korea University South Korea

TEACHING ASSISTANT Mar - Jun. 2022

• (BDC101) Introduction to Natural Language Processing in Big Data

• Lecture materials: https://github.com/J-Seo/BDC103\_IR

Korea University South Korea

RESEARCH ASSISTANT

Sep - Dec. 2021

Mar - Jun. 2021

- (DFE610) Natural Language Processing for Digital Finance Engineering
- Lecture materials: https://github.com/nlpai-lab/nlp-bible-code

Korea University South Korea

TEACHING ASSISTANT

- (BDC101) Introduction to Natural Language Processing in Big Data
- Lecture materials: https://github.com/J-Seo/BDC103\_IR

# **All Publications**

#### **PREPRINTS**

# Language Chameleon: Transformation analysis between languages using Cross-lingual Post-training based on Pre-trained language models

Suhyune Son, Chanjun Park, Jungseob Lee, Midan Shim, Chanhee Lee, Yoonna Jang, **Jaehyung Seo**, Heuiseok Lim arXiv preprint arXiv:2209.06422 (2022)

#### TOP CONFERENCE

#### K-HALU: Multiple Answer Korean Hallucination Benchmark for Large Language Models

Jaehyung Seo, Heuiseok Lim

ICLR 2025 - The Thirteenth International Conference on Learning Representations

#### **CoME: An Unlearning-based Approach to Conflict-free Model Editing**

Dahyun Jung, Jaehyung Seo, Jaewook Lee, Chanjun Park, Heuiseok Lim

NAACL 2025 - Proceedings of the North American Chapter of the Association for Computational Linguistics

#### Find the Intention of Instruction: Comprehensive Evaluation of Instruction Understanding for Large Language Models

Hyeonseok Moon, Jaehyung Seo, Seungyoon Lee, Chanjun Park, Heuiseok Lim

NAACL 2025 - Findings of the North American Chapter of the Association for Computational Linguistics

# KNOTICED: Augmentative and Alternative Communication Software for Language Developmental Disabilities

Sugyeong Eo, Jungwoo Lim, Chanjun Park, Hyeonseok Moon, Jaehyung Seo, Heuiseok Lim

LREC-COLING 2024 - The Joint International Conference on Computational Linguistics, Language Resources and Evaluation

# Intelligent Predictive Maintenance RAG framework for Power Plants: Enhancing QA with StyleDFS and Domain Specific Instruction Tuning

Seongtae Hong, Joong Min Shin, **Jaehyung Seo**, Taemin Lee, Jeongbae Park, Cho Man Young, Byeongho Choi, Heuiseok Lim *EMNLP 2024 - Proceedings of the 2024 Conference on Empirical Methods in Natural Language Processing: Industry Track* 

# KoCommonGEN v2: A Benchmark for Navigating Korean Commonsense Reasoning Challenges in Large Language Models

Jaehyung Seo, Jaewook Lee, Chanjun Park, SeongTae Hong, Seungjun Lee, Heuiseok Lim

ACL 2024 - Findings of the Annual Meeting of the Association for Computational Linguistics

# Length-aware Byte Pair Encoding for Mitigating Over-segmentation in Korean Machine Translation

Jungseob Lee, Hyeonseok Moon, Seungjun Lee Chanjun Park, Sugyeong Eo, Hyunwoong Ko, **Jaehyung Seo**, Seungyoon Lee, Heuiseok Lim

ACL 2024 - Findings of the Annual Meeting of the Association for Computational Linguistics

# Leveraging Pre-existing Resources for Data-Efficient Counter-Narrative Generation in Korean

Seungyoon Lee, Chanjun Park, DaHyun Jung, Hyeonseok Moon, **Jaehyung Seo**, Sugyeong Eo, Heuiseok Lim LREC-COLING 2024 - The Joint International Conference on Computational Linguistics, Language Resources and Evaluation

#### Generative Interpretation: Toward Human-Like Evaluation for Educational Question-Answer Pair Generation

Hyeonseok Moon, Jaewook Lee, Sugyeong Eo, Chanjun Park, **Jaehyung Seo**, Heuiseok Lim EACL 2024 - Findings of the Association for Computational Linguistics

#### Hyper-BTS Dataset: Scalability and Enhanced Analysis of Back TranScription (BTS) for ASR Post-Processing

Chanjun Park, **Jaehyung Seo**, Seolhwa Lee, Junyoung Son, Hyeonseok Moon, Sugyeong Eo, Chanhee Lee, Heuiseok Lim EACL 2024 - Findings of the Association for Computational Linguistics

#### CReTIHC: Designing Causal Reasoning Tasks about Temporal Interventions and Hallucinated Confoundings

Changwoo Chun, SongEun Lee, Jaehyung Seo, Heui-Seok Lim

EMNLP 2023 - Findings of the Association for Computational Linguistics

# CHEF in the Language Kitchen: A Generative Data Augmentation Leveraging Korean Morpheme Ingredients

Jaehyung Seo, Hyeonseok Moon, Jaewook Lee, Sugyeong Eo, Chanjun Park, Heuiseok Lim

EMNLP 2023 - Proceedings of the Conference on Empirical Methods in Natural Language Processing

# Informative Evidence-guided Prompt-based Fine-tuning for English-Korean Critical Error Detection

Dahyun Jung, Sugyeong Eo, Chanjun Park, Hyeonseok Moon, Jaehyung Seo, Heui-Seok Lim

IJCNLP-AACL 2023 - Proceedings of the 13th International Joint Conference on Natural Language Processing and the 3rd Conference of the Asia-Pacific Chapter of the Association for Computational Linguistics

#### KEBAP: Korean Error Explainable Benchmark Dataset for ASR and Post-processing

Seonmin Koo, Chanjun Park, Jinsung Kim, Jaehyung Seo, Sugyeong Eo, Hyeonseok Moon, Heui-Seok Lim

EMNLP 2023 - Proceedings of the Conference on Empirical Methods in Natural Language Processing

#### PEEP-Talk: A Situational Dialogue-based Chatbot for English Education

Seungjun Lee, Yoonna Jang, Chanjun Park, Jungseob Lee, **Jaehyung Seo**, Hyeonseok Moon, Sugyeong Eo, Seounghoon Lee, Bernardo Yahya, Heui-Seok Lim

ACL 2023 - Proceedings of the 61st Annual Meeting of the Association for Computational Linguistics (Volume 3: System Demonstrations)

#### QUAK: A Synthetic Quality Estimation Dataset for Korean-English Neural Machine Translation

Sugyeong Eo, Chanjun Park, Hyeonseok Moon, **Jaehyung Seo**, Gyeongmin Kim, Jungseob Lee, Heui-Seok Lim COLING 2022 - Proceedings of the 29th International Conference on Computational Linguistics

#### A Dog Is Passing Over The Jet? A Text-Generation Dataset for Korean Commonsense Reasoning and Evaluation

**Jaehyung Seo**, Seounghoon Lee, Chanjun Park, Yoonna Jang, Hyeonseok Moon, Sugyeong Eo, Seonmin Koo, Heuiseok Lim *NAACL 2022 - Findings of the Association for Computational Linguistics*, Seattle, United States

#### PicTalky: Augmentative and Alternative Communication Software for Language Developmental Disabilities

Chanjun Park, Yoonna Jang, Seolhwa Lee, Jaehyung Seo, Kisu Yang, Heuiseok Lim

IJCNLP-AACL 2022 - The 2nd Conference of the Asia-Pacific Chapter of the Association for Computational Linguistics

#### **Priming Ancient Korean Neural Machine Translation**

Chanjun Park, Seolhwa Lee, Jaehyung Seo, Hyeonseok Moon, Sugyeong Eo, Heuiseok Lim

LREC 2022 - Proceedings of the Language Resources and Evaluation Conference, Marseille, France

#### INTERNATIONAL JOURNAL

#### An analysis on language transfer of pre-trained language model with cross-lingual post-training

Suhyune Son, Chanjun Park, Jungseob Lee, Midan Shim, Chanhee Lee, Yoonna Jang, **Jaehyung Seo**, Jungwoo Lim, Heuiseok Lim ESWA 2025 - Experts Systems with Application

#### Exploiting hanja-based resources in processing Korean historic documents written by common literati

Hyeonseok Moon, Myunghoon Kang, **Jaehyung Seo**, Sugyeong Eo, Chanjun Park, Yeongwook Yang, Heuiseok Lim *ACCESS* 12 (2024) pp. 59909–59919. IEEE

#### Uncovering the Risks and Drawbacks Associated with the Use of Synthetic Data for Grammatical Error Correction

Seonmin Koo, Chanjun Park, Seolhwa Lee, **Jaehyung Seo**, Sugyeong Eo, Hyeonseok Moon, Heuiseok Lim *IEEE Access* (2023). IEEE

#### A Survey on Evaluation Metrics for Machine Translation

Seungjun Lee, Jungseob Lee, Hyeonseok Moon, Chanjun Park, **Jaehyung Seo**, Sugyeong Eo, Seonmin Koo, Heuiseok Lim *Mathematics* 11.4 (2023) p. 1006. MDPI

# Doubts on the reliability of parallel corpus filtering

Hyeonseok Moon, Chanjun Park, Seonmin Koo, Jungseob Lee, Seungjun Lee, **Jaehyung Seo**, Sugyeong Eo, Yoonna Jang, Hyunjoong Kim, Hyoung-gyu Lee

Expert Systems with Applications 233 (2023) p. 120962. Elsevier

### Word-level Quality Estimation for Korean-English Neural Machine Translation

Sugyeong Eo, Chanjun Park, Hyeonseok Moon, Jaehyung Seo, Heuiseok Lim

IEEE Access 10 (2022) pp. 44964–44973. IEEE

#### Dense-to-Question and Sparse-to-Answer: Hybrid Retriever System for Industrial Frequently Asked Questions

**Jaehyung Seo**, Taemin Lee, Hyeonseok Moon, Chanjun Park, Sugyeong Eo, Imatitikua D Aiyanyo, Kinam Park, Aram So, Sungmin Ahn, Jeongbae Park

Mathematics 10.8 (2022) p. 1335. MDPI

# Plain Template Insertion: Korean-Prompt-Based Engineering for Few-Shot Learners

**Jaehyung Seo**, Hyeonseok Moon, Chanhee Lee, Sugyeong Eo, Chanjun Park, Jihoon Kim, Changwoo Chun, Heuiseok Lim *IEEE Access* 10 (2022) pp. 107587–107597

### PU-GEN: Enhancing generative commonsense reasoning for language models with human-centered knowledge

**Jaehyung Seo**, Dongsuk Oh, Sugyeong Eo, Chanjun Park, Kisu Yang, Hyeonseok Moon, Kinam Park, Heuiseok Lim *Knowledge-Based Systems* (2022) p. 109861. Elsevier

#### Research on Utilization Strategy of User Engagements in Korean Fake News Detection

Myunghoon Kang, Jaehyung Seo, Chanjun Park, Heuiseok Lim

IEEE Access (2022) pp. 1-1

# BERTOEIC: Solving TOEIC Problems Using Simple and Efficient Data Augmentation Techniques with Pretrained Transformer Encoders

Jeongwoo Lee, Hyeonseok Moon, Chanjun Park, **Jaehyung Seo**, Sugyeong Eo, Heuiseok Lim *Applied Sciences* 12.13 (2022) p. 6686. Multidisciplinary Digital Publishing Institute

#### Return on Advertising Spend Prediction with Task Decomposition-Based LSTM Model

Hyeonseok Moon, Taemin Lee, **Jaehyung Seo**, Chanjun Park, Sugyeong Eo, Imatitikua D Aiyanyo, Jeongbae Park, Aram So, Kyoungwha Ok, Kinam Park

Mathematics 10.10 (2022) p. 1637. MDPI

#### An Automatic Post Editing with Efficient and Simple Data Generation Method

Hyeonseok Moon, Chanjun Park, **Jaehyung Seo**, Sugyeong Eo, Heuiseok Lim

# The ASR Post-Processor Performance Challenges of BackTranScription (BTS): Data-Centric and Model-Centric Approaches

Chanjun Park, **Jaehyung Seo**, Seolhwa Lee, Chanhee Lee, Heuiseok Lim

Mathematics 10.19 (2022)

#### Comparative Analysis of Current Approaches to Quality Estimation for Neural Machine Translation

Sugyeong Eo, Chanjun Park, Hyeonseok Moon, Jaehyung Seo, Heuiseok Lim

Applied Sciences 11.14 (2021) p. 6584. Multidisciplinary Digital Publishing Institute

#### Grounded Vocabulary for Image Retrieval Using a Modified Multi-Generator Generative Adversarial Network

Kuekyeng Kim, Chanjun Park, Jaehyung Seo, Heuiseok Lim

IEEE Access (2021). IEEE

#### An Empirical Study on Automatic Post Editing for Neural Machine Translation

Hyeonseok Moon, Chanjun Park, Sugyeong Eo, **Jaehyung Seo**, Heuiseok Lim *IEEE Access* 9 (2021) pp. 123754–123763. IEEE

#### DOMESTIC JOURNAL

#### Policy-based performance comparison study of Real-time Simultaneous Translation

Jungseob Lee, Hyeonseok Moon, Chanjun Park **Jaehyung Seo**, Sugyeong Eo, Seungjun Lee, Seonmin Koo, Heuiseok Lim *Journal of the Korea Convergence Society* 13.3 (2022) pp. 43–54. Korea Convergence Society

#### Error Analysis of Recent Conversational Agent-based Commercialization Education Platform

Seungjun Lee, Chanjun Park, Jaehyung Seo, Heuiseok Lim

Journal of the Korea Convergence Society 13.3 (2022) pp. 11-22. Korea Convergence Society

#### **Study on Zero-shot based Quality Estimation**

Sugyeong Eo, Chanjun Park, **Jaehyung Seo**, Hyeonseok Moon, Heuiseok Lim *Journal of the Korea Convergence Society* 12.11 (2021) pp. 35–43. Korea Convergence Society

#### **Research on Recent Quality Estimation**

Sugyeong Eo, Chanjun Park, Hyeonseok Moon, **Jaehyung Seo**, HeuiSeok Lim *Journal of the Korea Convergence Society* 12.7 (2021) pp. 37–44. Korea Convergence Society

#### **Study on Decoding Strategies in Neural Machine Translation**

**Jaehyung Seo**, Chanjun Park, Sugyeong Eo, Hyeonseok Moon, Heuiseok Lim *Journal of the Korea Convergence Society* 12.11 (2021) pp. 69–80. Korea Convergence Society

#### **Recent Automatic Post Editing Research**

Hyeonseok Moon, Chanjun Park, Sugyeong Eo, Jaehyung Seo, HeuiSeok Lim *Journal of Digital Convergence* 19.7 (2021) pp. 199–208. Journal of Digital Convergence

#### The Verification of the Transfer Learning-based Automatic Post Editing Model

Hyeonseok Moon, Chanjun Park, Sugyeong Eo, Jaehyung Seo, Heuiseok Lim Journal of the Korea Convergence Society 12.10 (2021) pp. 27–35. Korea Convergence Society

#### A Study on Verification of Back TranScription(BTS)-based Data Construction

Chanjun Park, **Jaehyung Seo**, Seolhwa Lee, Hyeonseok Moon, Sugyeong Eo, Heuiseok Lim

Journal of the Korea Convergence Society 12.11 (2021) pp. 109-117. Korea Convergence Society

#### **DOMESTIC CONFERENCE**

#### Post-negation Text Induce New Hallucinations in Large Language Models

Jaehyung Seo, Aram So, Heuiseok Lim

[Best Paper] HCLT 2024 - Annual Conference on Human and Language Technology

### **Word-level Korean-English Quality Estimation**

Sugyeong Eo, Chanjun Park, Jaehyung Seo, Heonseok Moon, HeuiSeok Lim

The 33rd Annual Conference on Human & Cognitive Language Technology

#### KommonGen: A Dataset for Korean Generative Commonsense Reasoning Evaluation (Best Paper Award)

**Jaehyung Seo**, Chanjun Park, Heonseok Moon, Sugyeong Eo, Myunghoon Kang, Seounghoon Lee, HeuiSeok Lim *The 33rd Annual Conference on Human & Cognitive Language Technology* 

#### **Persona-based Korean Conversational Model**

Yoonna Jang, Jungwoo Lim, Yuna Hur, Kisu Yang, Chanjun Park, **Jaehyung Seo**, Seungjun Lee, HeuiSeok Lim The 33rd Annual Conference on Human & Cognitive Language Technology

# Proposal of Automated Essay Scoring Method based on Deep-Learning

Yujin Kim, Chanjun Park, Seolhwa Lee, HeuiSeok Lim

The 33rd Annual Conference on Human & Cognitive Language Technology

# Model Training and Data Augmentation Schemes For the High-level Machine Reading Comprehension

Jeongwoo Lee, Hyeonseok Moon, Chanjun Park, HeuiSeok Lim

The 33rd Annual Conference on Human & Cognitive Language Technology

#### Comparative study of Korean speech recognition based on SpecAugment and Kaldi

Seounghoon Lee, Chanjun Park, Jaehyung Seo, Gyeongmin Kim, HeuiSeok Lim

The 33rd Annual Conference on Human & Cognitive Language Technology

#### Verification of the Domain Specialized Automatic Post Editing Model

Heonseok Moon, Chanjun Park, Jaehyung Seo, Sugyeong Eo, HeuiSeok Lim

The 33rd Annual Conference on Human & Cognitive Language Technology

#### BackTranScription (BTS)-based Jeju Automatic Speech Recognition Post-processor Research

Chanjun Park, **Jaehyung Seo**, Seolhwa Lee, Heonseok Moon, Sugyeong Eo, Yoonna Jang, HeuiSeok Lim The 33rd Annual Conference on Human & Cognitive Language Technology

#### Categorization and Analysis of Error Types in the Korean Speech Recognition System (Best Paper Award)

Junyoung Son, Chanjun Park, Jaehyung Seo, HeuiSeok Lim

The 33rd Annual Conference on Human & Cognitive Language Technology

#### **Attention Patterns and Semantics of Korean Language Models**

Kisu Yang, Yoonna Jang, Jingwoo Lim, Chanjun Park, Hwanseok Jang, HeuiSeok Lim

The 33rd Annual Conference on Human & Cognitive Language Technology

#### MMA: Multi-modal Message Aggregation for Korean VQA

Sungjin Park, Chanjun Park, Jaehyung Seo, HeuiSeok Lim

The 32st Annual Conference on Human & Cognitive Language Technology

#### Workshop

#### **Knowledge Graph-Augmented Korean Generative Commonsense Reasoning**

Dahyun Jung, **Jaehyung Seo**, Jaewook Lee, Chanjun Park, Heuiseok Lim *ICML-DMLR workshop* (2023)

#### Synthetic Alone: Exploring the Dark Side of Synthetic Data for Grammatical Error Correction

Chanjun Park, Seonmin Koo, Seolhwa Lee, **Jaehyung Seo**, Sugyeong Eo, Hyeonseok Moon, Heuiseok Lim

#### Focus on FoCus: Is FoCus focused on Context, Knowledge and Persona?

SeungYoon Lee, Jungseob Lee, Chanjun Park, Sugyeong Eo, Hyeonseok Moon, Jaehyung Seo, Jeongbae Park, Heui-Seok Lim COLING 2022 - Proceedings of the 1st Workshop on Customized Chat Grounding Persona and Knowledge

#### A Self-Supervised Automatic Post-Editing Data Generation Tool

Hyeonseok Moon, Chanjun Park, Sugyeong Eo, **Jaehyung Seo**, Seung Jun Lee, Heuiseok Lim *ICML 2022 - DataPerf workshop* (2022)

#### A New Tool for Efficiently Generating Quality Estimation Datasets

Sugyeong Eo, Chanjun Park, **Jaehyung Seo**, Hyeonseok Moon, Heuiseok Lim NeurlPS 2021 - Data-centric Al (DCAI) workshop

# **Dealing with the Paradox of Quality Estimation**

Sugyeong Eo, Chanjun Park, Hyeonseok Moon, Jaehyung Seo, Heuiseok Lim

MT Summit - Proceedings of the 4th Workshop on Technologies for MT of Low Resource Languages (LoResMT2021), Virtual

# Automatic Knowledge Augmentation for Generative Commonsense Reasoning

**Jaehyung Seo**, Chanjun Park, Sugyeong Eo, Hyeonseok Moon, Heuiseok Lim NeurlPS 2021 - Data-centric Al (DCAI) workshop

# BTS: Back TranScription for Speech-to-Text Post-Processor using Text-to-Speech-to-Text

Chanjun Park, **Jaehyung Seo**, Seolhwa Lee, Chanhee Lee, Hyeonseok Moon, Sugyeong Eo, Heuiseok Lim ACL 2021 - Proceedings of the 8th Workshop on Asian Translation (WAT2021), Online

# How should human translation coexist with NMT? Efficient tool for building high quality parallel corpus

Chanjun Park, Seolhwa Lee, Hyeonseok Moon, Sugyeong Eo, **Jaehyung Seo**, Heuiseok Lim NeurIPS 2021 - Data-centric Al (DCAI) workshop (2021)