#### NATURAL LANGUAGE PROCESSING & ARTIFICIAL INTELLIGENCE LAB · KOREA UNIVERSITY

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# Research Interests\_

I am a MS/Ph.D student in the Department of Computer Science and Engineering at Korea University. My advisor is prof. Heuiseok Lim, and I am part of the Natural Language Processing & Artificial Intelligence Lab.

- · Data-Centric Al
- Neural Machine Translation
- Domain Specialized Neural Machine Translation
- · Ancient Korean Neural Machine Translation
- Simultaneous Speech Translation
- · Automatic Post Editing
- · Quality Estimation
- · Korean Spelling Correction
- Grammar Error Correction
- · Speech Recognition Post-Processor
- Dialogue Summarization
- · Al for Accessibility
- · Al for Education

# **Education**

Korea University Seoul, South Korea

M.S/Ph.D in Computer Science and Engineering, GPA: 4.5 / 4.5

Sep. 2019 - Current

- · Advisor: Heuiseok Lim
- Natural Language Processing & Artificial Intelligence Lab

# **Busan University of Foreign Studies(BUFS)**

Busan, South Korea

B.S. IN NATURAL LANGUAGE PROCESSING & CREATIVE CONVERGENCE, GPA: 4.2 / 4.5

Mar. 2015 - Exp. Aug. 2018

- Advisor: Pummo Ryu
- · Full Scholarship

# **Academic Services**

COLING 2022 South Korea

Virtual Social Chair Sep. 2021-Present

- COLING 2022: http://coling2022.org/
- Virtual Social Chair

Reviewer South Korea

Reviewer January.2021-Present

- ACL 2022
- NAACL 2022
- MDPI (Applied Sciences, Electronics, Entropy)

# **Selected Publications**

Should we find another model?: Improving Neural Machine Translation Performance with ONE-Piece Tokenization Method without Model Modification

**Chanjun Park**, Sugyeong Eo, Hyeonseok Moon, Heui-Seok Lim

Proceedings of the 2021 Conference of the North American Chapter of the Association for Computational Linguistics (NAACL 2021): Human Language Technologies: Industry Papers, 2021

CHANJUN. PARK · CURRICULUM VITAE

#### FreeTalky: Don't Be Afraid! Conversations Made Easier by a Humanoid Robot using Persona-based Dialogue

Chanjun Park, Yoonna Jang, Seolhwa Lee, Sungjin Park, Heuiseok Lim

AAAI 2022 - Artificial Intelligence for Education(AI4EDU) (2021). 2021

#### 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). 2021

# Two Heads are Better than One? Verification of Ensemble Effect in Neural Machine Translation

Chanjun Park, Sungjin Park, Seolhwa Lee, Taesun Whang, Heuiseok Lim

Proceedings of the Second Workshop on Insights from Negative Results in NLP - EMNLP 2021 Workshop, 2021, Online and Punta Cana, Dominican Republic

#### 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

Proceedings of the 8th Workshop on Asian Translation (WAT2021) - ACL 2021 Workshop, 2021, Online

# 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, 2021

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

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

Proceedings of the 4th Workshop on Technologies for MT of Low Resource Languages (LoResMT2021), 2021, Virtual

# A New Tool for Efficiently Generating Quality Estimation Datasets

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

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

#### 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, 2021

#### Exploring the Data Efficiency of Cross-Lingual Post-Training in Pretrained Language Models

Chanhee Lee, Kisu Yang, Taesun Whang, Chanjun Park, Andrew Matteson, Heuiseok Lim

Applied Sciences 11.5 (2021) p. 1974. Multidisciplinary Digital Publishing Institute, 2021

# Towards Syntax-Aware Dialogue Summarization using Multi-task Learning

Seolhwa Lee, Kisu Yang, **Chanjun Park**, João Sedoc, Heui-Seok Lim

EMNLP 2021 - Widening NLP (WiNLP2021) workshop, 2021

#### 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, 2021

# Variational Reward Estimator Bottleneck: Towards Robust Reward Estimator for Multidomain Task-Oriented Dialogue

Jeiyoon Park, Chanhee Lee, Chanjun Park, Kuekyeng Kim, Heuiseok Lim

Applied Sciences 11.14 (2021) p. 6624. Multidisciplinary Digital Publishing Institute, 2021

# Automatic Knowledge Augmentation for Generative Commonsense Reasoning

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

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

# Neural Spelling Correction: Translating Incorrect sentences to Correct sentences for Multimedia

Chanjun Park, Kuekyeng Kim, YeongWook Yang, Minho Kang, HeuiSeok Lim

Multimedia Tools and Applications (2020) pp. 1–18. Springer, 2020

# **Ancient Korean Neural Machine Translation**

Chanjun Park, Chanhee Lee, YeongWook Yang, Heuiseok Lim

IEEE Access 8 (2020) pp. 116617-116625. 2020

# Comparison of the evaluation metrics for Neural Grammatical Error Correction with Overcorrection

Chanjun Park, YeongWook Yang, Chanhee Lee, Heuiseok Lim

IEEE Access 8 (2020) pp. 106264-106272. 2020

# **Decoding Strategies for Improving Low-Resource Machine Translation**

Chanjun Park, Yeongwook Yang, Kinam Park, Heuiseok Lim

Electronics 9.10 (2020) p. 1562. Multidisciplinary Digital Publishing Institute, 2020

# **Honors & Awards**

2021.12	Naver Ph.D. Fellowship, 2021, Naver	South Korea
2021.10	<b>Best Paper Award (NLP Application 2 Section), 2021,</b> The 33rd Annual Conference on Human & Cognitive Language Technology (HCLT2021)	South Korea
2021.10	<b>Best Paper Award (Language Resource Section), 2021,</b> The 33rd Annual Conference on Human & Cognitive Language Technology (HCLT2021)	South Korea
2021.10	<b>Best Paper Award (QA and Speech Section), 2021</b> , The 33rd Annual Conference on Human & Cognitive Language Technology (HCLT2021)	South Korea
2020.11	1st Place in Flitto Hackathon (Team Lead), 2020, Flitto	South Korea
2020.10	<b>Best Paper Award, 2020,</b> The 32nd Annual Conference on Human & Cognitive Language Technology (HCLT2020)	South Korea
2020.05	Best practices for using NIA AI training data(Korean-English Neural Machine Translation model), AI Hub	South Korea
2019.10	<b>Best Paper Award, 2019,</b> The 31st Annual Conference on Human & Cognitive Language Technology (HCLT2019)	South Korea
2019.10	1st Place Microsoft AI Accessibility Hackathon in Korea (Team Lead), Microsoft	South Korea
2019.03	Graduate School Associate Scholarship, Sungkyunkwan University	South Korea
2018.10	<b>Next Generation Information Processing NLP Competition 2018: Participation Award</b> , Next-generation information computing technology development business	South Korea
2017.06	Bit Computer Excellence Award (President Award), Bit Computer	South Korea
2015-2019	Full Scholarship, BUFS	South Korea
2016-2017	Scholarship for academic excellence, Sooyoungro Church	South Korea

# Selected Research Experience

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

Seoul, South Korea

December 2021 - June 2022

RESEARCHER IN KOREA UNIV

Research for Static and Dynamic Parallel Corpus Filtering and Mining

- · Human-inspired curriculum learning based NMT
- Supported by NAVER PAPAGO
- · Skills: Neural Machine Translation, Parallel corpus filtering, Pytorch, Fairseq

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

Seoul, South Korea

RESEARCHER IN KOREA UNIV

July. 2021. - December. 2021.

- · 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 3 research paper in NeurIPS 2021 Data-centric AI (DCAI) workshop: https://eval.how/dcai2021/index.html
- Skills: Neural Machine Translation, Web Application, Fairseq

# **Image Retrieval Research**

Seoul, South Korea

June. 2021. - September. 2021.

RESEARCHER IN KOREA UNIV

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

# (Project) Development of patent document invention sentence extraction and key phrase extraction module

Seoul, South Korea

RESEARCHER IN KOREA UNIV

June. 2021. - December. 2021.

- Supported by "LG Innotek"
- Al for Patent
- T5 based Key sentence extraction and key phrase generation
- · Skills: Automatic Summarization, Sentence classification, Information Extraction Pytorch, Huggingface

# **Dialogue Summarization Research**

Seoul, South Korea

RESEARCHER IN KOREA UNIV

- Syntax-Aware Dialogue Summarization using Multi-task Learning
- Skills: Dialogue system, Automatic Summarization, Pytorch, Huggingface
- Publication of research paper in EMNLP 2021 -Widening NLP (WiNLP2021) workshop
- · Publication of research paper in NeurIPS 2021 Women in Machine Learning (WiML 2021) workshop
- Publication of research paper in IEEE Access (SCIE)

June. 2021. - Present

RESEARCHER IN KOREA UNIV April. 2021. - July. 2021

- · Robust Reward Estimator for Multidomain Task-Oriented Dialogue
- Skills: Dialogue system, Pytorch, Huggingface
- Publication of research paper in Applied Science (SCIE): https://www.mdpi.com/2076-3417/11/14/6624

# (Project) Subtitle production and editing technology development for colloquial broadcasting contents

Seoul, South Korea

RESEARCHER IN KOREA UNIV

April. 2021. - December, 2024.

- · Development of Colloquial Aware Neural Machine Translation (CANMT) model that is robust to colloquial expression based on broadcast con-
- Consortium: Korea Univ, Hanyang Univ, ON THE IT, SBS Contents Hub, CBS
- · Supported by IITP
- Korean Colloquial-Sentence-Splitter(Ko-CSS) for simultaneous speech translation
- · Neural Architecture Search(NAS) based NMT Research
- Speech recognition post-processor research
- · Cross lingual adaptation research
- · Skills: Neural Machine Translation, Automatic Speech Recognition, simultaneous speech translation, Pytorch, Huggingface, Fairseq
- Ko-CSS Demo: http://nlplab.iptime.org:32285/

# BTS: Speech recognition post-processor Research

Seoul, South Korea

RESEARCHER IN KOREA UNIV

January. 2021. - Present

- Proposed BackTranScription(BTS)
- Proposed Text to Speech to Text (TST) methodology
- Skills: Neural Machine Translation, Pytorch, Huggingface, Fairseq
- Publication of research paper in WAT 2021 (ACL Workshop): https://aclanthology.org/2021.wat-1.10/
- Demo: https://backtrans-317413.de.r.appspot.com/

# **Cross Lingual Pretrained Language Model Research**

Seoul, South Korea

RESEARCHER IN KOREA UNIV

January. 2021. - March. 2021.

- · Research for Exploring the Data Efficiency of Cross-Lingual Post-Training in Pretrained Language Models
- · Research for combining BART and Parallel Corpus Filtering
- Skills: Neural Machine Translation, Pytorch, Huggingface, Fairseq
- Publication of research paper in Applied Science (SCIE): https://www.mdpi.com/2076-3417/11/5/1974

# **Automatic Post Editing Research**

Seoul, South Korea

RESEARCHER IN KOREA UNIV

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/
- · Low Resource APE and Pseudo APE data generation
- Skills: Neural Machine Translation, Pytorch, Automatic Post Editing, Huggingface, Fairseq

# **Quality Estimation Research**

Seoul, South Korea

RESEARCHER IN KOREA UNIV

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/
- · Skills: Neural Machine Translation, Pytorch, Quality Estimation, OpenKiwi, Huggingface, Fairseq

# **COVID-19 Machine Translation Platform**

Seoul, South Korea

RESEARCHER IN KORFA UNIV

May. 2020. - November.2020

- Neural Machine translation specialized for COVID-19 domain
- Skills: Neural Machine Translation, Pytorch, Python
- Publication of research paper in Journal of the Korea Convergence Society(KCI): https://bit.ly/2QgQKLK

# (Project) Domain Specialized Neural Machine Translation (Security)

Seoul, South Korea

May. 2020. - November.2020

RESEARCHER IN KOREA UNIV

Research on Neural Machine Translation specialized for security domain

- Skills: Neural Machine Translation, Pytorch, Python
- · Supported by "National Security Research Institute"
- · Project Manager, Tech Lead
- · Development of the latest translation model based on Transformer/BERT, Al-based Korean-English translation model suitable for the security field, and research trend of the latest Al-based translation technology research
- We propose Cross Communication Method (CCM), a new DS-NMT training methodology, inspired by cognitive scientific interpretation of cross language speech perception. This is the first study to reflect cognitive science theory in DS-NMT training methodology.

# (Project) A Neural-Symbolic Model for Knowledge Acquisition and Inference Techniques

Seoul, South Korea April. 2020. - Present

RESEARCHER IN KOREA UNIV

- Neural-Symbolic Model Research and Development
- Skills: Neural Symbolic Computing, Knowledge base, Pytorch, Python
- Supported by IITP
- Demo: http://nlplab.iptime.org:32245/

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

Seoul, South Korea

March. 2020. - Present

RESEARCHER IN KORFA UNIV

- Ancient Korean Neural Machine Translation Research
- Bilingual Word Embedding for Ancient Korean Neural Machine Translation
- Priming Ancient Korean Neural Machine Translation Research
- Skills: Pytorch, Python, REST API, Flask, Neural Machine Translation
- Demo: http://nlplab.iptime.org:32242/
- Publication of research paper in IEEE Access(SCIE): https://ieeexplore.ieee.org/document/9125904/

#### **Deep Learning based Grammar Error Correction**

Seoul, South Korea

June. 2019. - June. 2020

RESEARCHER IN KOREA UNIV

- Deep learning based English grammar corrector development
- Skills: Pytorch, Python, REST API, Flask, Neural Machine Translation
- Demo: http://nlplab.iptime.org:32292/
- Publication of research paper in IEEE Access(SCIE): https://ieeexplore.ieee.org/document/9102992

# **Deep Learning based Korean Spelling Correction**

Seoul, South Korea

June. 2019. - Present

RESEARCHER IN KOREA UNIV

- Development of Korean spelling corrector based on deep learning
- Skills: Pytorch, Python, REST API, Flask, Neural Machine Translation
- Demo: http://nlplab.iptime.org:32288/
- Publication of research paper in multimedia tools and applications(SCIE): https://link.springer.com/article/10.1007/ s11042-020-09148-2

# **Multilingual Neural Machine Translation**

Seoul South Korea

RESEARCHER IN KOREA UNIV June. 2019. - Present

- · Deep learning based Korean-English and English-Korean, Korean-Japanese machine translator development
- Research for Parallel Corpus Filtering, Data Augmentation, Various decoding strategies
- Skills: Pytorch, Python, REST API, Flask, Neural Machine Translation
- Demo: http://nlplab.iptime.org:32296/
- Best practices for using NIA AI training data: http://www.aihub.or.kr/node/4525
- Publication of research paper in ELECTRONICS(SCIE): https://www.mdpi.com/2079-9292/9/10/1562#cite
- Our paper is accepted in NAACL 2021 Industrial Track: "Should we find another model?: Improving Neural Machine Translation Performance with ONE-Piece Tokenization Method without Model Modification"
- · How to improve the performance of NMT without changing the model through data pre- and post-processing
- Publication of research paper in NAACL 2021: https://www.aclweb.org/anthology/2021.naacl-industry.13/
- Verification of Ensemble Effect in Neural Machine Translation
- Publication of research paper in EMNLP 2021 Workshop on Insights from Negative Results in NLP: https://insights-workshop.github. io/2021/cfp/

Al for Education Research Seoul, South Korea

· FreeTalky: Don't Be Afraid! Conversations Made Easier by a Humanoid Robot using Persona-based Dialogue

- Automatic Essay Scoring Research
- · PEEP-Talk: Deep Learning-based English Education Platform for Personalized Foreign Language Learning
- Skills: Pytorch, Python, Google Cloud Platform, REST API, Nao Toolkit
- Publication of research paper in AAAI 2022 Artificial Intelligence for Education (AI4EDU) workshop: https://arxiv.org/abs/2112.04126

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

Seoul, South Korea

April. 2019. - Present

RESEARCHER IN KOREA UNIV

RESEARCHER IN KOREA UNIV June. 2019. - Present

- · PickTalky: Design of augmentative alternative communication (AAC) software for children with developmental disabilities
- 1st Place Microsoft AI Accessibility Hackathon in Korea (Team Lead)
- Award: https://bit.ly/2vPaZ91
- PickTalky Demo: https://pictalky-311.de.r.appspot.com/

# (Project) Research and development of human-inspired multiple intelligence

Seoul, South Korea

RESEARCHER IN KOREA UNIV

September. 2019. - August. 2022

- Human-inspired language understanding model
- Funded by the Korea Ministry of Science and ICT (MSIT)
- Site: http://hiai.co.kr/

# (Project) Next-generation information computing technology development business

Seoul, South Korea

RESEARCHER IN KORFA UNIV

- September. 2019. January. 2021. • Development of Core Application Techniques for Korean Intelligent Systems
- Research and development of Korean natural language processing core technology

# (Project) Core technology development of the real-time simultaneous speech translation based on knowledge enhancement

Seoul, South Korea

RESEARCHER IN SYSTRAN June. 2018. - July.2019

- Collaboration with the Korea Electronics and Telecommunications Research Institute (ETRI) Language Intelligence Research Group
- Director: Dr. Young-Gil Kim (ETRI)
- 3rd year: Real-time lecture interpretation solution development
- · 4th year: Busan University of Foreign Studies Field Groud Test (FGT) progress and software maintenance
- Skills: JAVA, JAVA FX, Kaldi

# (Project) Neural Machine Translation service for SK Telecom's in-house education program

Seoul, South Korea

RESEARCHER IN SYSTRAN April. 2019. - April. 2019

- Development of automation software to provide translation service to SK Telecom's in-house education program
- · Skills: Python

#### **LCloud-API Platform Service Development**

Seoul, South Korea

RESEARCHER IN SYSTRAN January. 2019. - June.2019

- Planning and development of natural language processing API Platform Service
- · Gravitee IO-based platform design, planning, marketing materials production, strategy establishment
- REST API management using Swagger
- Transcription API, Translation API, Address Correction API, Speaker Verification API
- Learned Microservices architecture(MSA),IT Infrastructure
- Skills: Gravitee IO, Microservices architecture (MSA), IT Infrastructure, Mockup, Marketing, Strategic Planning, Technology management, Amazon

# Speech recognition transcription tool development

Seoul, South Korea

RESEARCHER IN SYSTRAN

January. 2019. - July. 2019

- Development and maintenance of speech recognition transcription tool, modification and addition of various functions
- Skills: Front End, Spring Boot, Flask, AJAX, MySQL, Kaldi,

# (Project) CJ Logistics Speech Recognition Agent

Seoul, South Korea

RESEARCHER IN SYSTRAN

Aug. 2018. - July. 2019

- CJ Logistics artificial intelligence (AI) virtual assistant project
- Skills: Quality Assurance, Quality control, Mockup, Strategic Planning, Kaldi

# Automatic subtitle generation platform service development and planning

Seoul, South Korea

RESEARCHER IN SYSTRAN

June. 2018. - June.2019

- Development and maintenance of automatic subtitle generation platform
- Establish platform service strategies such as B2B and B2C
- Various company contacts and SWOT analysis
- Skills: JAVA, JAVA FX, Kaldi, Mockup, Strategic Planning, Technology management, Marketing

#### Planning of English speaking evaluation platform service

Seoul, South Korea

RESEARCHER IN SYSTRAN June. 2018. - December.2018

- Establishing a service strategy using English speaking evaluation technology
- English speaking evaluation technology Q.A & Q.C
- Skills: Quality Assurance, Quality control, Mockup, Strategic Planning, Technology management, Marketing

# Customer-specific recognizer service platform service planning

Seoul, South Korea

RESEARCHER IN SYSTRAN

June. 2018. - April.2018

- Customer-specific recognizer service app service design
- Establish platform service strategies such as B2B and B2C
- · Skills: Mockup, Marketing, Strategic Planning, Technology management

# **Speech Recognition Research**

Seoul South Korea

RESEARCHER IN SYSTRAN

- Research for Automatic Speech Recognition Technology
- Acoustic Model, Language Model
- Speaker Verification
- Kaldi
- English speaking evaluation
- Real-time speech recognition system
- · Skills: Kaldi

Aug. 2018. - July. 2019

#### **Neural Machine Translation Research**

RESEARCHER IN SYSTRAN

- Research for Neural Machine Translation
- Skills: OpenNMT Tensorflow, OpenNMT Pytorch

# (Project) Development of multilingual word translation service based on Korean semantics analysis for multicultural family

RESEARCHER IN BUFS

- Han-Tong-E: Multilingual Word Translation Service based on Word Semantic Analysis
- Collaboration with Professor Ok Cheol-young's laboratory at Ulsan University
- Project homepage development
- In-depth understanding of Utagger and seminar on WSD
- Build project-related data and conduct surveys
- Project Page: https://bufsconv.blogspot.kr/
- Funded by National Research Foundation of Korea(NRF)

# (Project) Establishment of Gold Standard language resource bank for Korean machine learning and evaluation (Next-generation information computing technology development business)

RESEARCHER IN BUFS

• For the purpose of developing Korean Natural Language Toolkit

- Development of automatic Korean word spacing and Korean compound noun decomposer
- · Skills: Python

# (Project) Local industry development project in connection with public institutions

RESEARCHER IN BUFS

- ICT VAEMS: Vertical Aquaculture Energy Management
- Funded by the Korea Institute for Advancement of Technology(KIAT)

# (Project) Basic Research on Semantic Frame Generation for Short Questions (ExoBrain)

RESEARCHER IN BUFS

· Exobrain Project

Seoul, South Korea

Seoul, South Korea

Aug. 2018. - July. 2019

Sep. 2016. - June. 2018

Seoul, South Korea

Sep. 2017. - June. 2018

Seoul, South Korea

Sep. 2016. - Aug. 2017

Seoul, South Korea

Oct. 2015. - Feb. 2016

# **Professional Experience**

# SYSTRAN, Automatic Speech Recognition(ASR) Team

Seoul, South Korea

RESEARCH ENGINEER Sep. 2018 - July. 2019

- · Core technology development of the real-time simultaneous speech translation based on knowledge enhancement (ETRI)
- · Participated in NTT Docomo speech Recognition Solution Project
- Participated in CJ Logistics speech recognition agent development project
- Participated in Samsung SDS speech recognition project
- Speech recognition service planning and development (Real-time lecture interpretation, Automatic subtitle generation service, English speaking evaluation, Customer-specific recognizer service, Web RTC-based Real-time video interpretation)
- Deep learning based speech recognition research (Acoustic Model, Language Model Training)
- Machine Translation research
- · Iaas and Paas service planning, API Platform service operation planning, B2B B2C planning and development
- · Micro Service Architecture Design and Successful API Platform Service Launching Experience (LCloud)
- · Governmental project proposal experience
- Reason for leaving: Graduate school

# SYSTRAN, Automatic Speech Recognition(ASR) Team

Seoul, South Korea

RESEARCH INTERN

June. 2018 - August. 2018

- Participated a project "Core technology development of the real-time simultaneous speech translation based on knowledge enhancement (FTRI)"
- Developed Simultaneous Speech Translation (implemented using JAVA, Python and Kaldi)

# Skills

**Programming** JAVA, Python, C / C++

Machine Learning & Deep Learning Pytorch, Keras, Tensorflow, OpenNMT, Kaldi

**Natural Language Processing** Machine Translation, Speech Recognition, Neuro-Symbolic Computing

**Full Stack** Html, CSS, Javascipt, Java FX, Oracle, MySQL, Spring Boot, VertX, AWS

Strategy & Planning API Platform Service, Platform Service Planning, Gravitee IO, Paas, Iaas, Q.A, Q.C, Mockup, Swagger

**Etc** MS Office, Redmine, Linux, Docker, Web RTC, Latex

**Language Skills** Korean, English, Japanese, Thai, Myanmar

# Patents.

2019.12	Device and method for correcting Korean spelling, Apply for a patent	South Korea
2020.09	APPARATUS AND METHOD FOR OUTPUTTING IMAGE CORRESPONDING TO LANGUAGE, Apply for a patent	South Korea
2020.09	METHOD OF TRANSLATING ANCIENT KOREAN USING MACHINE TRANSLATION, Apply for a patent	South Korea
2020.09	Correction performance evaluation metrics of neural network machine translation and method of	South Korea
	constructing the same, Apply for a patent	South Noted
2020.09	METHOD OF BUILDING TRAINING DATA OF MACHINE TRANSLATION, Apply for a patent	South Korea
2021.03	Improving speech recognition performance using TTS in domain-specific environment, Apply for a	South Korea
	patent	South Noted
2021.05	Method For Generating Training Data And Method For Post-Processing Of Speech Recognition Using	South Korea
	The Same, Apply for a patent	South Noted
2021.09	DEVICE AND METHOD FOR GENERATING OPTIMAL TRANSLATION SUBTITLE USING QUALITY	South Korea
	<b>ESTIMATION</b> , Apply for a patent	South Noted
2021.09	<b>DEVICE AND METHOD FOR GENERATING TRAINING DATA FOR AUTOMATIC POST EDITING, </b> Apply for a	South Korea
	patent	South Noteu
2021.09	METHOD OF BUILDING TRAINING DATA OF MACHINE TRANSLATION, PCT International Application	South Korea
2021.09	APPRATUS FOR CORPUS PROCESSING, APPARATUS AND METHOD AND MATHINE TRANSLATION, Apply	South Korea
	for a patent	South Noteu
2021.11	DEVICE AND METHOD FOR GENERATING OF TRAINING DATA FOR QUALITY ESTIMATION IN MACHINE	South Korea
	TRANSLATION, Apply for a patent	South Korea

2019.12	Deep Learning based English Grammar Error Correction, http://nlplab.iptime.org:32292/	South Korea
2019.12	Deep Learning based Korean Spelling Correction, http://nlplab.iptime.org:32288/	South Korea
2020.01	Korea University Neural Machine Translation Platform, http://nlplab.iptime.org:32296/	South Korea
2020.02	Neural Symbolic Inference, http://nlplab.iptime.org:32245/	South Korea
2020.02	English Free Talking and Grammar Error Correction Feed Back System using NAO Robot,	South Korea
	https://www.youtube.com/watch?v=R16dG_4cnFk	
2020.03	Korean Ancient Neural Machine Translation Platform, http://nlplab.iptime.org:32242/	South Korea
2020.03	PicTalky: Text to Pictogram Demo for Children with Developmental Disabilities,	South Korea
	https://pictalky-311.de.r.appspot.com/	South Noted
2020.05	COVID-19 Machine Translation Platform, http://nlplab.iptime.org:32250/	South Korea
2020.07	Ancient Korean Translation & Machine Reading Comprehension with NAO,	South Korea
	https://www.youtube.com/watch?v=nXBZe-t9a-4&t=8s	South Korea
2020.11	Bilingual Education Using NAO, https://www.youtube.com/watch?v=4kCMMa62LDY&t=9s	South Korea
2021.04	Ko-CSS (Korean Colloquial-Sentence-Splitter) for simultaneous speech translation,	South Korea
	http://nlplab.iptime.org:32285/	South Noted
2021.06	BTS (BackTranScription) for STT Post-Processor, https://backtrans-317413.de.r.appspot.com/	South Korea
2021.09	Translation platfrom with AIHUB dataset, http://nlplab.iptime.org:32247/	South Korea
2021.09	Con-Talky, http://nlplab.iptime.org:32245/	South Korea
2021.09	Korea University English Grammar Corrector KakaoTalk Channel, http://pf.kakao.com/_cqxkps	South Korea
2021.09	PEEP-Talk, http://pf.kakao.com/_FlDxgs	South Korea
2021.10	A Tool for generating High-Quality Parallel Corpus considering Human Translation Market,	South Korea
	http://nlplab.iptime.org:9090/	South Noted
2021.10	A New Tool for Efficiently Generating Quality Estimation Datasets, http://nlplab.iptime.org:9091/	South Korea
2021.11	A Self-Supervised Automatic Post-Editing Data Generation Tool, http://nlplab.iptime.org:9092/	South Korea

# **Invited Talk & Teaching Experience**

**Korea University** South Korea

TEACHING ASSISTANT

Autumn 2021

South Korea

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

# **Busan Social Welfare Development Institute**

INVITED ADVISOR July. 2021

Attending advisory meetings and Focus Group Interview

• ICT-Based Ecosystem Construction Plan to Secure Opportunities to Enjoy Together - A Study on Developmental Disabilities

**Korea University** South Korea

HEAD TEACHING ASSISTANT

Autumn 2020

- (BDC101) Introduction to Natural Language Processing in Big Data
- (DFE610) Natural Language Processing for Digital Finance Engineering

**Korea University** South Korea

TEACHING ASSISTANT

Spring 2020

- (COSE461) Natural Language Processing
- (DFC615)Artificial Intelligence and Natural Language Processing
- Lecture materials: https://github.com/Parkchanjun/KU-NLP-2020-1

**LLsoLLu** South Korea

PRESENTER

PRESENTER

March. 2020

- Latest natural language processing trends
- · Language Representation, Neural Symbolic Computing
- Invited by LLsoLLu Global Strategy and Planning Team

**NC SOFT** South Korea

• Technology Transfer Seminar

February. 2020

- Korean Spelling Corrector Using Automatic Noise Generation Methodology
- Invited by NC SOFT Language AI Team

**Dongguk University** South Korea

PRESENTER January, 2020

• A.I - NLP - MT for Liberal Arts

INSTRUCTOR

- Introduction to Natural Language Processing, RBMT, SMT, NMT, OpenNMT
- · Invited by Dongguk University, Department of English Language and Literature professor. Myung-Kwan Park
- Lecture materials: https://github.com/Parkchanjun/Dongguk\_AI\_NLP\_MachineTranslation

**SKC** South Korea

- Deep Learning and Natural Language Processing Course • Introduction of Text Preprocessing and NLP for Linguistics
- Introduction of Word Embedding
- Introduction of Machine Translation
- Lecture materials(Text Preprocessing): https://github.com/Parkchanjun/SKC\_Text\_Preprocessing
- · Lecture materials(Introduction of Machine Translation): https://github.com/Parkchanjun/SKC\_MachineTranslation

**Naver Tech Talk** South Korea

PRESENTER Aug. 2019

- Machine Translation for Everyone
- Invited by Sung Kim who are the Head of Naver Clova A.I
- Lecture videos: https://tv.naver.com/v/9906991

**SK T Academy** South Korea

INSTRUCTOR Aug. 2019

- Machine Translation for Everyone
- · Invited by SK Planet
- Introduction to Natural Language Processing, RBMT, SMT, NMT, OpenNMT
- Lecture videos: https://tacademy.skplanet.com/live/player/onlineLectureDetail.action?seq=165

**Sooyoungro Church** South Korea

INSTRUCTOR Aug. 2017 - Dec.2017

- · Sooyoungro Church Dream Bowl School Instructor (Free Service)
- Basic English Grammar and English Conversation Education

**Korea Press Foundation** South Korea

INSTRUCTOR Aug. 2015 - Dec.2015

· Reading mentoring

Oct. 2019 - Nov.2019

# **All Publications**

# **PREPRINTS**

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

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

arXiv preprint arXiv:2109.12941 (2021). 2021

# Empirical Analysis of Korean Public AI Hub Parallel Corpora and in-depth Analysis using LIWC

**Chanjun Park**, Midan Shim, Sugyeong Eo, Seolhwa Lee, Jaehyung Seo, Hyeonseok Moon, Heuiseok Lim arXiv preprint arXiv:2110.15023 (2021). 2021

#### Who says like a style of Vitamin: Towards Syntax-Aware DialogueSummarization using Multi-task Learning

Seolhwa Lee, Kisu Yang, Chanjun Park, João Sedoc, Heuiseok Lim

arXiv preprint arXiv:2109.14199 (2021). 2021

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

Hyeonseok Moon, **Chanjun Park**, Sugyeong Eo, Jaehyung Seo, Seung Jun Lee, Heuiseok Lim *arXiv preprint arXiv:2111.12284* (2021). 2021

# TOP CONFERENCE

# Should we find another model?: Improving Neural Machine Translation Performance with ONE-Piece Tokenization Method without Model Modification

Chanjun Park, Sugyeong Eo, Hyeonseok Moon, Heui-Seok Lim

Proceedings of the 2021 Conference of the North American Chapter of the Association for Computational Linguistics (NAACL 2021): Human Language Technologies: Industry Papers, 2021

# FreeTalky: Don't Be Afraid! Conversations Made Easier by a Humanoid Robot using Persona-based Dialogue

Chanjun Park, Yoonna Jang, Seolhwa Lee, Sungjin Park, Heuiseok Lim

AAAI 2022 - Artificial Intelligence for Education(AI4EDU) (2021). 2021

#### 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). 2021

#### Two Heads are Better than One? Verification of Ensemble Effect in Neural Machine Translation

Chanjun Park, Sungjin Park, Seolhwa Lee, Taesun Whang, Heuiseok Lim

Proceedings of the Second Workshop on Insights from Negative Results in NLP - EMNLP 2021 Workshop, 2021, Online and Punta Cana, Dominican Republic

#### 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

Proceedings of the 8th Workshop on Asian Translation (WAT2021) - ACL 2021 Workshop, 2021, Online

# Dealing with the Paradox of Quality Estimation

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

Proceedings of the 4th Workshop on Technologies for MT of Low Resource Languages (LoResMT2021), 2021, Virtual

# A New Tool for Efficiently Generating Quality Estimation Datasets

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

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

# Towards Syntax-Aware Dialogue Summarization using Multi-task Learning

Seolhwa Lee, Kisu Yang, Chanjun Park, João Sedoc, Heui-Seok Lim

EMNLP 2021 - Widening NLP (WiNLP2021) workshop, 2021

# Automatic Knowledge Augmentation for Generative Commonsense Reasoning

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

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

#### INTERNATIONAL JOURNAL

#### 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, 2021

#### 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, 2021

# Exploring the Data Efficiency of Cross-Lingual Post-Training in Pretrained Language Models

Chanhee Lee, Kisu Yang, Taesun Whang, **Chanjun Park**, Andrew Matteson, Heuiseok Lim

Applied Sciences 11.5 (2021) p. 1974. Multidisciplinary Digital Publishing Institute, 2021

#### 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, 2021

# Variational Reward Estimator Bottleneck: Towards Robust Reward Estimator for Multidomain Task-Oriented Dialogue

Jeiyoon Park, Chanhee Lee, Chanjun Park, Kuekyeng Kim, Heuiseok Lim

Applied Sciences 11.14 (2021) p. 6624. Multidisciplinary Digital Publishing Institute, 2021

#### Neural Spelling Correction: Translating Incorrect sentences to Correct sentences for Multimedia

Chanjun Park, Kuekyeng Kim, Yeong Wook Yang, Minho Kang, Heui Seok Lim

Multimedia Tools and Applications (2020) pp. 1–18. Springer, 2020

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

Chanjun Park, Chanhee Lee, YeongWook Yang, Heuiseok Lim

IEEE Access 8 (2020) pp. 116617-116625. 2020

# Comparison of the evaluation metrics for Neural Grammatical Error Correction with Overcorrection

Chanjun Park, YeongWook Yang, Chanhee Lee, Heuiseok Lim

IEEE Access 8 (2020) pp. 106264-106272. 2020

#### **Decoding Strategies for Improving Low-Resource Machine Translation**

Chanjun Park, Yeongwook Yang, Kinam Park, Heuiseok Lim

Electronics 9.10 (2020) p. 1562. Multidisciplinary Digital Publishing Institute, 2020

#### INTERNATIONAL CONFERENCE

# PicTalky: Deep learning-based speech therapy platform for developmental disabilities

Chanjun Park, Yanghee Kim, Yoonna Jang, Umadevi G.R, HeuiSeok Lim

The International Conference on Big data, IoT, and Cloud Computing, 2020

# **Domain-specialize Neural Machine Translation Methodology**

Chanjun Park, HeuiSeok Lim

International conference on Interdisciplinary research on Computer Science, Psychology, and Education, 2020

#### **Toward High Quality Parallel Corpus Using Monolingual Corpus**

Chanjun Park, Youngdae Oh, Jongkeun Choi, Dongpil Kim, HeuiSeok Lim

The 10th International Conference on Convergence Technology, 2020

### **Data Augmentation Method for Korean Neural Machine Translation**

Chanjun Park, Kinam Park, HeuiSeok Lim

INTERNATIONAL CONFERENCE ON INFORMATION, SYSTEM AND CONVERGENCE APPLICATIONS, 2020

# Self- Supervised Korean Spelling Correction via Denoising Transformer

Chanjun Park, Sungjin Park, HeuiSeok Lim

INTERNATIONAL CONFERENCE ON INFORMATION, SYSTEM AND CONVERGENCE APPLICATIONS, 2020

# Can artificial intelligence translate the Annals of the Joseon Dynasty?

Chanjun Park, Sungjin Park, Kinam Park, Jaechoon Jo, HeuiSeok Lim

The 10th International Conference on Convergence Technology, 2020

#### Design Neural Machine Translation Model Combining External Symbolic Knowledge in translation task

Sugyeong Eo, Chanjun Park, HeuiSeok Lim

 $International\ conference\ on\ Interdisciplinary\ research\ on\ Computer\ Science,\ Psychology,\ and\ Education,\ 2020$ 

# Free Talking NAO Robot for Children

Chanjun Park, Jaekue Choi, Sungjin Park, Yanghee Kim, HeuiSeok Lim

International conference on Interdisciplinary research on Computer Science, Psychology, and Education, 2019

# Improved Machine Translation Performance Using Two Stage Subword Tokenization

Chanjun Park, Sora Choi, HeuiSeok Lim

International conference on Interdisciplinary research on Computer Science, Psychology, and Education, 2019

# Quality before Quantity: Improved Machine Translation performance using parallel corpus filtering

Chanjun Park, Seunggyu Han, HeuiSeok Lim

International conference on Interdisciplinary research on Computer Science, Psychology, and Education, 2019

# Improved Machine Translation Performance Using Relative Ratio of Original and Synthetic Corpus Chanjun Park, Jang Mook Kang

International conference on Interdisciplinary research on Computer Science, Psychology, and Education, 2019

# DOMESTIC JOURNAL

#### A study on performance improvement considering the balance between corpus in Neural Machine Translation

Chanjun Park, Kinam Park, Sugyeong Eo, Hyeonseok Moon, HeuiSeok Lim

Journal of the Korea Convergence Society 12.5 (2021) pp. 23-29. Korea Convergence Society, 2021

# Research on Subword Tokenization of Korean Neural Machine Translation and Proposal for Tokenization Method to Separate Jongsung from Syllables

Sugyeong Eo, Chanjun Park, Hyeonseok Moon, HeuiSeok Lim

Journal of the Korea Convergence Society 12.3 (2021) pp. 1–7. Korea Convergence Society, 2021

# **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, 2021

#### Filter-mBART Based Neural Machine Translation Using Parallel Corpus Filtering

Hyeonseok Moon, Chanjun Park, Sugyeong Eo, JeongBae Park, HeuiSeok Lim

Journal of the Korea Convergence Society 12.5 (2021) pp. 1–7. Korea Convergence Society, 2021

# **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, 2021

#### 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, 2021

# **Cross-Validated Ensemble Methods in Natural Language Inference**

Kisu Yang, Taesun Whang, Dongsuk Oh, Chanjun Park, HeuiSeok Lim

Journal of KIISE 48.2 (2021) pp. 154-159. Korean Institute of Information Scientists and Engineers (KIISE), 2021

#### Neural Machine translation specialized for Coronavirus Disease-19 (COVID-19)

Chanjun Park, Kyeong-Hee Kim, Ki-Nam Park, Heui-Seok Lim

Journal of the Korea Convergence Society 11.9 (2020) pp. 7-13. Korea Convergence Society, 2020

#### An AI Service to support communication and language learning for people with developmental disability

Chanjun Park, Yanghee Kim, Yoonna Jang, Umadevi G.R, HeuiSeok Lim

Journal of the Korea Convergence Society 11.6 (2020) pp. 51–57. 2020

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

Chanjun Park, HeuiSeok Lim

Journal of the Korea Convergence Society 11.5 (2020) pp. 1–8. 2020

# A Study on the Performance Improvement of Machine Translation Using Public Korean-English Parallel Corpus

Chanjun Park, HeuiSeok Lim

Journal of Digital Convergence 18.6 (2020) pp. 271–277. 2020

#### DOMESTIC CONFERENCE

#### 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, 2021

# 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, 2021

#### 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, 2021

# 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, 2021

# 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, 2021

# 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, 2021

# PEEP-Talk: Deep Learning-based English Education Platform for Personalized Foreign Language Learning (Best Paper Award)

Seungjun Lee, Yoonna Jang, Chanjun Park, Minwoo Kim, Bernardo N Yahya, HeuiSeok Lim

The 33rd Annual Conference on Human Cognitive Language Technology, 2021

# Deep Learning based Korean Dialect Machine Translation Research

Sangbeom Lim, Chanjun Park, Jaechoon Jo, Yeongwook Yang

The 33rd Annual Conference on Human Cognitive Language Technology, 2021

# **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, 2021

# 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, 2021

# Con-Talky: Information Extraction and Visualization Platform for Communication of Construction Industry

Midan Shim, Chanjun Park, Yuna Hur, HeuiSeok Lim

The 33rd Annual Conference on Human Cognitive Language Technology, 2021

# 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, 2021

# A Comparative Study on Korean Relation Extraction with entity position information

Suhyune Son, Yuna Hur, Jungwoo Lim, Midan Shim, Chanjun Park, HeuiSeok Lim

The 33rd Annual Conference on Human Cognitive Language Technology, 2021

# **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, 2021

#### Quality, not Quantity?: Effect of parallel corpus quantity and quality on Neural Machine Translation

Chanjun Park, Yeonsu Lee, Chanhee Lee, HeuiSeok Lim

The 32st Annual Conference on Human Cognitive Language Technology, 2020

#### Alleviation of Overcorrection Problem in Neural Korean Spelling Correction

Chanjun Park, Yeonsu Lee, Kisu Yang, HeuiSeok Lim

The 32st Annual Conference on Human Cognitive Language Technology, 2020

# Design Neural Machine Translation Model Combining External Symbolic Knowledge

Sugyeong Eo, Chanjun Park, HeuiSeok Lim

The 32st Annual Conference on Human Cognitive Language Technology, 2020

#### Cross-Lingual Transfer of Pretrained Transformers to Resource-Scarce Languages (Best Paper Award)

Chanhee Lee, Chanjun Park, Gyeongmin Kim, Dongsuk Oh, HeuiSeok Lim

The 32st Annual Conference on Human Cognitive Language Technology, 2020

# 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, 2020

#### **Korean Spell Correction based on Denoising Transformer**

Chanjun Park, Sol Jeong, kisu Yang, Sumi Lee, Jaechoon Joe, HeuiSeok Lim

The 31st Annual Conference on Human Cognitive Language Technology, 2019

# Parallel Corpus Filtering and Korean-Optimized Subword Tokenization for Machine Translation

Chanjun Park, Gyeongmin Kim, HeuiSeok Lim

The 31st Annual Conference on Human Cognitive Language Technology, 2019

# Optimization of Data Augmentation Techniques in Neural Machine Translation

Chanjun Park, Kuekyeng Kim, HeuiSeok Lim

The 31st Annual Conference on Human Cognitive Language Technology, 2019

# Comparative Study of Sentiment Analysis Model based on Korean Linguistic Chracteristics

Gyeongmin Kim, Chanjun Park, HeuiSeok Lim

The 31st Annual Conference on Human Cognitive Language Technology, 2019

# Cross-Validated Ensemble Methods in Natural Language Inference (Best Paper Award)

Kisu Yang, Taesun Whang, Dongsuk Oh, Chanjun Park, HeuiSeok Lim

The 31st Annual Conference on Human Cognitive Language Technology, 2019

#### Korean Spacing Module using Eojeol dictionary and Morpheme dictionary

Chanjun Park, Jin-hyuk Choi, Pummo Ryu

Korea Software Congress 2018, 2018

# Knowledge-enhancing Real-time Lecture interpreter service Development

**Chanjun Park**, Minho Kang, Byunggun Park, Suntae Kim, Myeongjin Hwang, Dongpil Kim, Young-kil Kim Korea Software Congress 2018, 2018

# Voice recognition performance improvement using TTS system in address recognition system

**Chanjun Park**, Suntae Kim, Minho Kang, Myeongjin Hwang, Byunggun Park, Yeonsu Kim

Korea Software Congress 2018, 2018

# Improved speech recognition performance in business meeting environments using domain-specific method

Chanjun Park, Suntae Kim, Minho Kang, Byunggun Park, Myeongjin Hwang, Yeonsu Kim

Korea Software Congress 2018, 2018

# Spam/Ham Classification using Ensemble Technique of Machine Learning Algorithms

Chanjun Park, Pummo Ryu

Korea Computer Congress 2018, 2018

# Two-Stage Korea Compound Noun Decomposer

Chanjun Park, Pummo Ryu

The 30st Annual Conference on Human Cognitive Language Technology, 2018

# **Dictionary based Compound Noun Decomposer using Resource extension**

Chanjun Park, Hyejin Won, Pummo Ryu

Korea Computer Congress 2018, 2018

# **BOOK CHAPTERS**

# **Natural Langugae Processing Bible**

Heuiseok Lim, Korea University NLPAI Lab

Human Science, https://www.aladin.co.kr/shop/wproduct.aspx?partner=rss&ISBN=K412637214, 2020

# **Extracurricular Activity**

# Operate Naver's natural language processing blog

South Korea 2016.Dec-Present

**BLOGGER** 

- URL: https://blog.naver.com/bcj1210
- · Linguistics for natural language processing
- Natural Language Processing (NLP)
- Machine Translation for Everyone
- Business, strategy, and planning for everyone
- Natural language processing with NLTK
- · Software engineering
- Today's CCM

MEMBERS

STUDENT

PLANNER

STUDENT

**OpenNMT Forum Members** 

South Korea

2019.July-2019.July

• Active as OpenNMT Forum Members

• Develop and share OpenNMT Pytorch, Tensorflow, Library Tutorial

South Korea

2011 2010 0

ETRI's machine translation quality evaluator

• Quality evaluation of machine translation hosted by ETRI

2019.October-2019.December

Completion of basic curriculum for natural language processing and language intelligence
Student

2019.July-2019.July

South Korea

• Korea University Human-Inspired AI & Computing Research Center

2019.July-2019.July

Completed the natural language processing tutorial (2016-2019)

South Korea

2016 - 2019

Special Interest Group of Human and Cognitive Language Technology

Reporter, Korea Electronics and Telecommunications Research Institute (ETRI)

South Korea

REPORTER

• Served as 3rd and 4th reporters at the Korea Electronics and Telecommunications Research Institute

South Korea

2016.Feb-2018.Feb

Served as Sira and itemporters at the Norea Electronics and refeccioninal neathons research institute

Supporters 2017.Dec-2017.Dec

• The first plito supporters

**Flitto Supporters** 

2011.DCC-2011.DCC

Journalist of the Ministry of Science and ICT

South Korea 2016.Feb-2017.Feb

• 8 articles published

- Visit Exobrain Quiz Show
- URL: https://blog.naver.com/bcj1210/221147196551

Planning a video lecture for Natural Language Processing Basic at BUFS

South Korea 2016.July-2016.July

South Korea

• URL: https://bit.ly/2NmFJV1

2070.0019 2070.0019

**BIT Computer Advanced Course Completion** 

2016.January-2016.August

• Bet Advanced Course Completion and Bet President Award

- Bit project level 2 license
- · Development of intelligent English learning APP

South Korea

BIT Computer Short Course Completion
Student

2015.June-2015.August

• Short-term course completion (C, JAVA, Data Structure)

# Courses related to natural language processing and computer engineering

South Korea 2015-Present

STUDENT

- Computer Programming Basics 1 (C Language) (A+)
- Linguistics basics (A+)
- Basic language processing (A+)
- Computer and Information Society (A+)
- Introduction to computers (A+)
- Computer architecture (A+)
- Data structure (A)
- Concepts of programming language (A+)
- Operating system (A+)
- Database (A+)
- Natural language processing (BUFS) (A+)
- Advanced computer programming (System Programming, Machine Learning) (A+)
- Software Engineering (A+)
- Natural Language processing project (A+)
- Information extraction and text mining (A+)
- Machine learning application (A)
- Cognitive basis of linguistics (A+)
- Natural language processing (KU) (A+)
- Knowledge Representation Techniques (KU) (A+)
- Special Topics in Natural Language Processing (KU) (A+)
- Entrepreneurship and Technology Startups (KU) (A+)
- Smart Factory Security Seminar II (KU) (A+)
- Theory of Artificial Intelligence (KU) (A+)
- Special Topics in Computational Linguistics (KU) (A+)
- Korean Information Processing (KU) (A+)