# KWAK, JEONGWON

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focus on now

#### **EDUCATION**

# **Kwangwoon University**Bachelor of Science in Information Convergence, Major in Data Science - Major GPA: 4.35/4.5 Comulative GPA: 4.33/4.5 (Comulative Credit: 150/133)

#### WORK EXPERIENCE

#### **Assistant Researcher**

Development of general natural language processing technology based on deep learning for information extraction and sentiment analysis

Jun 2019 - Feb 2020 NRF

· Morphological analysis and sentiment analysis for feature extraction SW-centered University (realted NLP & Data Mining)

Apr 2019- Dec 2019

· Built dataset for tour reviews through crawling, preprocessed text data for feature extraction

ПТР

#### **Undergraduate Researcher**

Aug 2019 - Dec 2019

Development of automatic trend of reviews detection algorithm

· Researched on the automatic detection of review trends based on sentiment analysis, n-gram

#### **PUBLICATIONS**

#### **Journal Papers**

· Jeong, H., Kwak, J., Kim, J., Jang, J, Lee, H. "A Study on Methods of Automatic Extraction	Feb 2020
of Korean-Language Modification Relations for Sentiment Analysis" (ICAIIC 2020)	IEEE
· Lee, J., Kwak, J., Kim, D., Cho, S., Park, J. "Hyper-parameter Optimization for Neural Machine	Jul 2020
Translation on Korean-English" (KCC 2020)	KIISE
Patent Applications	

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• **Kwak, J.**, Kim, J., Cho, J., "System for Automatically Generating Code Using Voice Recognition Oct 2020 and Method for Automatically Generating Code Using the Same"

· Kwak, J., Jeong, H., Kim, J., "A Method of Sentimental Feature and Vocabulary Extraction" Dec 2019

#### PROJECT EXPERIENCE

#### **Korean-English Neural Machine Translation**

Feb 2020 - Jun 2020

Contributor, Presenter — Python

- · Capstone Design Project, NMT model optimized for Korean-to-English translation using transformer model based on OpenNMT(open-source framework)
- · Used Korean-English translation corpus colledted from AI-Hub, Tatoeba, adopted tokenization method optimized for each language, and performed hyper-parameter tuning experiments
- · Final model performance(BLEU): 33.55

## **Coding Education Program Using Speech Recognition and Deep Learning**

Mar 2020 – Jun 2020

Team Leader, Contributor, Presenter — Python

- · Self-Directed Project, Developed an artificial intelligence translation system that converts Korean speech into codes
- · Combined speech recognition model with machine translation model

## **Smart Rowing System Application Using Management Records and Database**

Contributor, Presenter — Java(Android), SQL

- Industry-Linked Capstone Design Project, Solved the challenges provided by the company
- · Created ERD and developed the application to measure and store match records
- · Designed to be stored in the database using tablets

#### **AWARDS SCHOLARSHIPS**

President 's Award, Translation System for Korean-English Conversation	Kwangwoon Univ.
Popularity Award, Translation System for Korean-English Conversation	Kwangwoon Univ.
Encouragement Award, Self-Directed Project Performance Presentation	Kwangwoon Univ.
Encouragement Award, 5G-based ICT Convergence Service Idea Contest	KICS
Excellence Award, SW Startup Idea Competition	Kwangwoon Univ.
Excellence Award, Capstone Design(Industry-Linked)	Kwangwoon Univ.
Excellence Award, The 7th Startup Idea Contest	Jeonbuk National Univ.
Dean's List, Academic Achievement Award (2018-2)	Kwangwoon Univ.
Dean's List, Academic Achievement Award (2018-1)	Kwangwoon Univ.
Dean's List, Academic Achievement Award (2017-1)	Kwangwoon Univ.
	Popularity Award, Translation System for Korean-English Conversation Encouragement Award, Self-Directed Project Performance Presentation Encouragement Award, 5G-based ICT Convergence Service Idea Contest Excellence Award, SW Startup Idea Competition Excellence Award, Capstone Design(Industry-Linked) Excellence Award, The 7th Startup Idea Contest Dean's List, Academic Achievement Award (2018-2) Dean's List, Academic Achievement Award (2018-1)

#### **Scholarships**

2020-2	National Graduate Science & Technology Scholarship (Full-tuition)	KOSAF
2020-1	National Graduate Science & Technology Scholarship (Full-tuition)	KOSAF
2019-2	National Graduate Science & Technology Scholarship (Full-tuition)	KOSAF
2019-2	Software Excellence Scholarship	Kwangwoon Univ.
2019-1	2nd Academic Scholarship (Half-tuition)	Kwangwoon Univ.
2019-1	Faculty Association Scholarship	Kwangwoon Univ.
2018-2	Software Excellence (A+) Scholarship	Kwangwoon Univ.
2018-2	2nd Academic Scholarship (Half-tuition)	Kwangwoon Univ.
2018-1	3rd Academic Scholarship	Kwangwoon Univ.
2017-2	1st Academic Scholarship (Full-tuition)	Kwangwoon Univ.

#### **EXTRA-CURRICULAR**

#### **Statistics Talent Donation Volunteer**

2019 University Student Statistics Education Talent Donation Group 5th

· Taught statistics to elementary, middle and high schools students

**Vice-President of College** 

Vice-President of Kwangwoon University's 2nd College of Software Convergence

· Planned various college events including software related events

Machine/Deep Learning Group Study

Machine Learning and Deep Learning based on Tensorflow Studies during the Vacation

· Studied the theory and practice of machine learning and deep learning and reviewed papers

Jan 2018 – Dec 2018

*Apr* 2019 – *Nov* 2019

Statistics Korea, KOSTAT

Kwangwoon Univ.

Nov 2018 – Feb 2019

## Kwangwoon Univ.

#### TECHNICAL SKILLS

Languages Python, C, JAVA, R, SQL

**Libraries** Pytorch, Tensorflow, Numpy, Pandas, Matplotlib