# **Bitna Keum**

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### INTRODUCTION

I am currently senior in Computer and Information Engineering at Kwangwoon University. I'm passionate about Natural Language Processing. My long-term goal is to make human-like conversational chatbot, which can even replace a real friend and has various persona. To be one step closer to my goal, I'm currently taking an internship at NLP startup. In addition to, I'm continuously studying various techniques of NLP and practicing modeling by myself. I'd like to deepen my understanding of the field of NLP and do in-depth research, so I decide to go to graduate school. I'm looking forward to interacting with experienced professor and lab people to grow up.

## **EDUCATION**

### **Kwangwoon University**

Bachelor of Engineering, Department of Computer & Information Engineering  $\mbox{GPA}\ 4.16\ /\ 4.5$ 

Mar. 2017 - Feb. 2022 (Expected)
Seoul, South Korea

# **WORK EXPERIENCES**

Internship at TUNiB Inc.

Working as a data engineer at NLP startup

Building hyperscale Korean language models

Participation in NLP task competition

• Internship at GNC Solution Co., Ltd.

Studying Deep Learning and NLP

Developing Q&A Program based BERT

Stock Analysis using LSTM and magic formula

• **Development Part-time Job** at Esoftware Co., Ltd.

Developing .NET framework Application Software

Software UI/UX Design

Management of Database by SQL Query

Jul. 2021 - Present

Gangnam-gu, Seoul

Sep. 2019 - Feb. 2020

Songpa-gu, Seoul

Oct. 2019 - Dec. 2019

Songpa-gu, Seoul

## **PROJECT EXPERIENCES**

#### Solving Math Word Problem in Korean

Sep. 2021 - Oct. 2021

- Progressing in internship, and for 'AI GRAND CHALLENGE' competition
- Making math word problem dataset and mapping to python code
- Fine-tuning to GPT-3

### TUNiB-electra

Jul. 2021 - Sep. 2021

- Progressing in internship
- Web scraping, data preprocessing, and data management
- Collected 1.2TB Korean text data
- now we are making TUNiB-GPT

### Web Scraping Project

Jul. 2021 - Jul. 2021

- Personal project
- Scraping data from Namuwiki, Wikipedia, naver-blog, daum-blog, tistory, nate-pann, youtube

### Coin Price Prediction Project

May. 2021 - Jun. 2021

- Term project in Data Mining class
- To predict time-series data, tried various models (CNN, LSTM, Prophet, ARIMA, N-Beats)
- Got the best result using N-Beats with the profit of 2.23 times

## • Thanks For Today: smart diary analyzing myself

Feb. 2021 - Feb. 2021

- Participated in SW-central-university Joint Hackathon as a school representative
- Analyzing the text data of diary by NLP and showing it to user
- Extracting the key word/sentence and frequent words from diary, and Visualizing with Wordcloud

## • GAN-based Clothing Design Application Program

Jul. 2020 - May. 2021

- Industry-Academic collaboration project with LG
- Applying StarGAN and Mask R-CNN and Providing service as Web application
- Improved the model architecture of StarGAN, resulted in better performance
- Made the model 35% lighter

### Consumer-Entrepreneur Connection Web Community

Jan. 2020 - Mar. 2020

- Developing Web for communication between consumer and (prospective) entrepreneur
- Back-end development with Javascript using Node.js
- NoSQL Database management
- Won an Excellence Award in Autonomous Semester Design & Development Project

#### Developing BERT-based Q&A Program

Sep. 2019 - Feb. 2020

- Developing Q&A Program based BERT
- Trained the model on KorOuAD v10 dataset

# **EXTRACURRICULAR ACTIVITY**

### NLP Paper Reading Group 'Jibhyeonjeon'

Jun. 2021 - Present

- Intermediate class member
- Our team presented on the topic 'Task-Oriented Dialogue System'

#### Dacon Al Bit Trader Contest Season 2

May. 2021 - Jun. 2021

- Participated in the competition following the term project in Data Mining class
- Ranked 17th using N-Beats model with the profit of 2.23 times

### • Idea Contest for Utilizing AI

Nov 2020 - Nov 2020

- Won the 1st prize with the idea of 'Clothing pattern synthesis program using GAN'

### Coding School Tutor

Jan. 2019, Jan. 2021, Feb. 2021, Jul. 2021

- Working as a tutor of C and Python Coding School in Kwangwoon University
- Assisted and coached students in programming practice

### Deep Learning Study

Jul. 2020 - Aug. 2020

- Weekly study on CS231n of Stanford University
- With Industry-Academic collaboration project members and lab people

### Computer Vision Study

Jul. 2020 - Aug. 2020

- Weekly study on the Computer Vision
- With Industry-Academic collaboration project members and lab people

• Tech Blog Mar. 2019 - Present

- Recording anything I learn while studying
- [Link]

### C-language Study

Mar. 2017 - Jun. 2017

- Studied C-language and algorithm every week
- Attended to several seminars

### Information Security Study

Mar. 2017 - Jun. 2017

- Studied overall Information Security, especially Reverse Engineering every week
- Founding member of Information Security Club

# **AWARDS AND HONORS**

2021	Excellence Award, SW portfolio contest, Kwangwoon University
2020	President's Award (1st place), Idea Contest for Utilizing AI, Kwangwoon University
2020	Excellence Award, Autonomous Semester Design & Development Project, Kwangwoon University
2021, 2020, 2018	Academic Excellence Scholarship, Kwangwoon University

# **SKILLS**

# • Programming Skills

- Python (Skilled), C/C++ (Skilled), Java, JavaScript, SQL, R
- PyTorch, Tensorflow, Keras

# • Language Skills

- Korean (Native), English (TOEIC 855), Chinese (Beginner)