

# Dongmin Kim

AI RESEARCHER · MASTER STUDENT @ KAIST

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## Summary

AI Researcher pursuing M.S Degree at KAIST (Korea Advanced Institute of Science and Technology).

BA in Global Economics and Computer Science at Sungkyunkwan University.

Research interests in Time-series Analysis and Anomaly Detection.

## Publications

### WaveBound: Dynamic Error Bounds for Stable Time Series Forecasting

New Orleans, USA

YOUNGIN CHO\*, DAEJIN KIM\*, **DONGMIN KIM**, MOHAMMAD AZAM KHAN, JAEGUL CHOO

NeurIPS 2022

- Regularization Technique for Time-series forecasting models
- Publication Link: <https://arxiv.org/abs/2210.14303>

### Residual Correction in Real-Time Traffic Forecasting

Atlanta, Georgia, USA

DAEJIN KIM\*, YOUNGIN CHO\*, **DONGMIN KIM**, CHEONBOK PARK, JAEGUL CHOO

CIKM 2022

- Improving traffic models' performance using residual correction mechanism: modeling of failures
- Research project with Naver Maps Team, KAIST, UNIST
- Publication Link: <https://dl.acm.org/doi/abs/10.1145/3511808.3557432>

## Education

### Korea Advanced Institute of Science and Technology (KAIST)

Daejeon, South Korea

M.S. IN ARTIFICIAL INTELLIGENCE

Sept. 2021 - Present

- Academic Advisor: Jaegul Choo (GPA: 4.0/4.3)

### Sungkyunkwan University

Seoul, South Korea

B.A. IN GLOBAL ECONOMICS AND COMPUTER SCIENCE

Mar. 2014 - Feb. 2021

- GPA: 4.32/4.5 (Global Economics: 4.19/4.5, Computer Science 4.47/4.5)

### The Chinese University of Hong Kong

Shatin, N.T., Hong Kong

EXCHANGE STUDENT

Fall Semester, 2019

### Myungduk Foreign Language High School

Seoul, Korea

CHINESE DEPARTMENT

Mar. 2011 - Feb. 2014

## Work Experience

### KT Corporation (Korea Telecom)

Gyeonggi-do, South Korea

INTERN, SW ENGINEER

June. 2021 - Aug. 2021

- Developed Topological Visualization Web-based application based on Log Data of Computing Infrastructures
- Project Github: [https://github.com/carrtesy/KT\\_Genio\\_Topological\\_Visualization](https://github.com/carrtesy/KT_Genio_Topological_Visualization)

### Samil PwC

Seoul, Korea

INTERN, RISK ASSURANCE TEAM

Jan 2020 - Feb 2020

- Developed RPA service using UiPath and python

## Projects

### Autopilot Project

RESEARCHER

Daejeon, South Korea

Mar 2022 – Present

- Autopilot project with ROK ADD (Agency for Defense Development, Republic of Korea)
- Worked on Natural Language Processing Modules, especially Named Entity Recognition (NER) and Voice Recognition Module

### Year-Dream School Project

TEACHING ASSISTANT, LECTURER

Seoul, South Korea

Dec. 2021 – Mar. 2022

- Provided lectures on ML/DL, especially RNNs and Tree-based models
- Lecture materials can be found at: <https://github.com/carrtesy/tommys-awesome-lectures>

### Crude Oil Price Prediction based on Gaussian Kernel Function Networks

UNDERGRADUATE RESEARCHER (SKKU UNDERGRADUATE DISSERTATION)

Seoul, South Korea

Mar 2020 – Nov 2020

- Role: Dataset collection, model training, evaluations with Python (Advisor: Prof. Rhee Man Kil)
- Project Github: <https://github.com/carrtesy/Oil-Price-Prediction-Project>

### Tensor Decomposition for Deepfake Detection

UNDERGRADUATE RESEARCHER

Seoul, South Korea

July 2020 – Aug 2020

- Deepfake detection project using tensor decomposition algorithms, mainly TF Keras (Advisor: Prof. Simon Woo)
- Project Github: [https://github.com/carrtesy/Deepfake\\_with\\_tensor\\_decomposition](https://github.com/carrtesy/Deepfake_with_tensor_decomposition)

### Networking System Laboratory

UNDERGRADUATE RESEARCHER

Seoul, Korea

Aug. 2020 – Dec. 2020

- Packet Steering using SR-IOV, using Virtual NIC, Qemu, KVM (Advisor: Prof. Younghoon Kim)

### Pet-caring Robot Project

EMBEDDED SYSTEM PROJECT COURSE

Seoul, Korea

Sep 2020 – Dec 2020

- Role: Sound Streaming, Bluetooth, Display Control, Motor Control, Humidity Sensor Control with C, Python
- Presentation Video: [https://drive.google.com/file/d/1-Zy1u3YFXNSHyjKSyJK\\_4OnSqBsFRG7h/view?usp=sharing](https://drive.google.com/file/d/1-Zy1u3YFXNSHyjKSyJK_4OnSqBsFRG7h/view?usp=sharing)

### Xv6 Operating System Project

OPERATING SYSTEM COURSE

Seoul, Korea

Mar 2020 – June 2020

- Implemented Linux CFS Scheduling Algorithm, memory management, MMAP system call, Swap-in-and-out, File system extension using C
- Project Github: [https://github.com/carrtesy/xv6\\_OS\\_build\\_project](https://github.com/carrtesy/xv6_OS_build_project)

### Website Development

WEBSITE FOR SKKU FINANCE ASSOCIATION GLIF

Seoul, Korea

Dec 2018 – Mar 2019

- Developed and deployed websites using python Django and pythonanywhere
- Project Github: [https://github.com/carrtesy/GLIF\\_Website\\_Project](https://github.com/carrtesy/GLIF_Website_Project)

## Skills

<b>Programming</b>	Python, Pytorch, Keras, C, C++, Linux, Django, Javascript
<b>Tools</b>	Git, Docker, GCP
<b>Languages</b>	Korean (Native), English (Fluent), Mandarin (Basics)
<b>Hobbies</b>	Drum Playing, Weight Training, Basketball

## Extracurricular Activities and others

### SKKU Rock Band LCDA

DRUMMER

Seoul

Mar. 2014 - Dec. 2015

### SKKU Financial Academic Association GLIF

ASSOCIATION LEADER

Seoul, Korea

June. 2018 - June. 2019

### ROKAF Headquarter

AIRMAN OF INFORMATION SYSTEMS MANAGEMENT WING

Gyeryong-si, Korea

Dec. 2015 – Dec. 2017

- Administrative Affairs, managing military records, supporting English translation of documents