김선중 (SunJoong, Kim)

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Education

Bachelor of Science in Mathematics, Korea University, Seoul (3.77/4.5)	Feb. 2015
Master of Science in Mathematics, Korea University, Seoul (3.92/4.5)	Feb. 2024

Graduate School

Stock prediction using LSTM and wavelet Jul. – Dec. 2020
· KOSPI 200, binary classification (up/down, accuracy: 0.58)

Lipschitz constant of deep neural network Jul. – Oct. 2022
· Survey paper on stability of AI architectures

Production of TeX Template for Korea university graduate school Dec. 2022 – Feb. 2023
· thesis and dissertation template for TeX paper (math included paper)

Data Analytics Experiences

Suggesting SOCAR zone locations Dec. 2022 – Feb. 2023
· Aiffelthon of MODULABS, data provided by SOCAR

Anomaly detection on manufacturing Oct. 2022 – Nov. 2023
· LSTM classification on imbalanced data (f1 score: 0.87)

Recommendation system on 아이들나라 Nov. 2022 – Dec. 2023
· Enhancing model of neural collaborative filtering (recall: 0.2273, NDCG: 0.21)

Working Experiences

UI networks, 교통연구본부, 대리 Sep 2023 – Oct 2024
· Development and distribution of signal generation and traffic
  assignment algorithms in Seongnam ITS(intelligent transport system)
   - signal generation: simultaneous signal via signal DB
   - traffic assignment: align traffic volume using linear programming

IBEDU, math teacher Dec 2021 – Jan. 2022
· Teaching mathematics online 20+ students

private math teacher Mar. 2014 – Dec. 2018
· Teaching mathematics offline 50+ students

Programming and Maths

data processing	· numpy	· pandas	· scikit-learn
data visualization	· matplotlib	· seaborn	
machine learning	· tensorflow	· pytorch	· keras
code management	· git	· VS code	
math documentation	· TeX	· LaTeX	· github blog
math tool	· geogebra	· (mathematica)	· (mathlab)
mathematics	· calculus	· analysis	· linear algebra · set theory
	· probability	· abstract algebra	

Others

ADsP (Advanced Data Analytics Semi-Professional)   Nov. 2022

TEPS (346)   Feb. 2019