# Siwon Lee

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I want to forecast economic and social pheonomenon, moreover analyze and explain people's action and economic pattern. In this progress, I want to connect artificial intelligence method specially explainable AI.

# **EDUCATION**

### Sungkyunkwan Univeristy

Seoul, Korea

B.A. in Global Economics, BIT Soft Engineering, B.Math Mathematics

Mar 2021-Ongoing

- Anticipated Graduation Date: Aug 2024
- Cummulative GPA: 4.26/4.5, Global Econmics: 4.31/4.5, Software: 4.07/4.5, Mathematics: 4.5/4.5
- Relevant Course: Econometrics, Statistical Analysis for Economics, Basic Mathematics for Artificial Intelligence, GE Individual Research, INT macro/Micro theroy, Intro Financial Accounting

# LUSEM & HANKEN University

Sweden and Finland

Jan 2023-Jan 2023

 $Joint\ Winter\ Exchange\ School$ 

- · Visitied KPMG corporation in Helsinki and discussed sustainability
- Discussed critical thinking and examples of sustainability in each countries

# WORK EXPERIENCE

Wisdomagora Seoul, Korea

Editor Management Intern

Aug 2022 - Aug 2023

- Planned online article uploaded schedule and checked image copyrights.
- Edited online article content for business and economic sector written by other countries' international high school students.

# SKKU International Summer Semester TA

SKKU, Korea

Teaching Assistant

Jun 2022 - Jul 2022

- Communicated between professor and director related to lecture course or attendance problem
- Supported culture event as orientation or graduation targeted to exchanged student

### Computational Thinking and Software Coding TA

SKKU, Korea

Teaching Assistant

Feb 2023 - Jun 2023

• Graded stuendts code and received question related to course.

### RESEARCH PROGRAM

# Global Economic Individual Research

SKKU, Korea

Team Member

Jun 2022 - Jul 2022

- Solving solow model problem using numerical method and python numpy library
- Researched solow model with changing several model's assumption such as s is constant
- Analyed United States economic data using FRED API and python
- Structured ipynb file code and research output using Latex

### Global Economic Individual Research

SKKU, Korea

Team Member

Feb 2023 - Jun 2023

• Analyzed similarity between 2008 financial crisis and currently economic intension related to pandemic and war.

# TEACHING EXPERIENCE

## Young Economic Education Supporters

Bank of Korea, Korea Apr 2023 - Dec 2023

Teacher

Mentor

aurronau

- Lectured element school and middle student on role of BOK, currency and inflation, and history of currency.
- Lectured didactics and make material of lecture.

### Sungkyun Tutoring

SKKU, Korea

Mar 2022 - Dec 2022

- Built note when used python language tutoring and designed programming problems
- Educated concept of list, loop, and function and thinking method of algoritm
- Coached student's programming code and revised or assisted their code

# EXTRACURRICULAR ACTIVITIES

# **Becoming Economist**

SKKU, Korea

Vice President, Team Member

Mar 2022 - Ongoing

- reviewed several economic articles related to estimated of schooling, Rouwenhorst Method, and hyperbolic discount function.
- Constructed english certification study as TOEFL an GRE.
- Prepared study abroad as doctor programm with OB meeting

Seekers SKKU, Korea

Team Member Mar 2022 - Ongoing

- Debated economic and social issues as Middle Interest Rate, Global Supply Chain, and others.
- Participated mentoring with senior graduated of SKKU economic department.

**MIMIC** SKKU, Korea

Team Member Sep 2022 - Ongoing

- Communicated mathematic theorm such as four color theorm in regular seminar
- Studying regular lecture as binominal mathematic or linear algebra.
- Lectured Nash's existence theorem and minimax theorem of Von.

## Statistical Analysis for Economics Study

Global Economics, SKKU

Mar 2022 - Jun 2022

- Defined null hypothesis and calculated hypothesis's confidence level and t-value
- · Analyzed difference between standard normal distribution, khi distribution, and t distribution
- Calculated number of cases and probability as binominal, poisson distribution

# Global Leaers in Finance(GLIF)

Team Leader, Third Prize

Seoul, Korea

Team Member Mar 2021 - Ongoing

- Summarized important economic indicators such as S&P 500, KOSPI, and WTI rates to last market trends
- Abstract and translate daily articles from WSJ, FT, and BB in the field of macroeconomic news
- Structured fictional customer's portfolid and Analyzed Mezzanine and non-list company in an Academic-affiliated program

# PROJECT

# Analzed relationship between COVID-19 and trade

SKKU, Korea

Team Leader

Apr 2022 - Jun 2022

- Collected and analyzed COVID-19 data and international trade data using python
- Learning OLS regression with several different equation

Built codup.kr

online

Co-worker

Jan 2023 - Ongoing

- Implementation database structure and query between user and server
- Bulit ranking system and statistical analysis method using crawling of web-server data

Colleage Depart.Dean's List

SKKU, Korea

Sep 2021 - Nov 2021

- Assembles firm's financial statement, stock price, and trading volume data then standardized to excel data
- Implemented mock investment and classify investor tendency program using python library of pandas, mpl-finance

# **Project of Convergence Basics**

SKKU, Korea

Team Member

Team Member

Learning-Fair

Jun 2021 - Aug 2021

- Designed new items, using design thinking process as lottos-blossom & prototype test
- Collaborated with co-workers and delivered in front of professors and the CEO

# Calculated Production Possibility Function

SKKU, Korea

Apr 2021 - Jun 2021

- Calculated production possibility function on two different products and labor
- Solved feasible problem when gives each products price and budget line

# 2022 SKKU Annual Conference on Economics

SKKU, Korea

Top Prize

Jun 2022 - Aug 2022

- Analyzed neuron network method for economic research and comparison forecast efficiency to classical econometrics model.
- Tested several neuron network and econometrics model using past 50 years U.S. statstical data.

# 2022 Capston Design and AI Hackerton

The Korean Association of Computer Education

Encourgement Prize

Oct.13.2022

- Structured business canvas about new business item based on financial market and AI.
- Implemented AI model and front web design using R, LSTM, and time-series data.

Sungkyun tutoring

SKKU, Korea

Excellence Prize

Aug 2022 - Dec 2022

Facebook Hacker Cup 2021

Facebook, Online

Round 2

Aug 2021 - Sep 2021 Samsung, Online

Round 2

Jul 2021 - Sep 2021

**Problem Solving Contest** 

Sindang High school, Korea

First Grade

Dec 2019

Analyzing of Big Date contest by NH investment

Samsung Collegiate Programming Cup 2021

NH investment
Nov 2022

Participation Prize
2022-1 Dean's List

SKKU, KOREA

REPORT

# Forecasting Inflation and Economic Recession: Comparison of Econometrics and Machine Learning \*\*College of Economics\*\* \*\*College of Economics\*\* \*\*Tenant College o

Analyzed and forecasting inflation and GDP using ANN and classical econometrics method

· Reviewed progress and output of ANN model and economietrics model

# Forecasting Changing Phase of Financial Market When Implementation CBDC Feb 2022

DB financial investment

· Researched property of bonds, stocks, and currency swap future

• Calculated value and risk of financial products using value evaluation equation

# Implementation of CBDC to Reduce Public Antipathy of Privacy Violations Aug~2021

 $College\ of\ Economics$ 

- Analyzed pulic's dislike about private invasion any CBDC type and monetary policy
- Reviewed each CBDC type how work possible and impossible

# Creating Post COVID-19 Jobs by Maintaining and Changing Industries that Grown by COVID-19 May 2021 Department of Global Economics

Analyzed property of medical and online industries and proposed method of maintain of grown by COVID-19

# CONFERENCES ATTENED

MATLAB Expo Korea
Participation
MATLAB, Korea
Jun 2022

2022 SKKU International Conference: Trends in Digital Economy and Finance

SKKU., Korea

Participation

May~2022

# SCHOLARSHIP

# Scholarship for Academic Excellence Scholarship for Academic Excellence

 $\begin{array}{c} \mathrm{Feb}\ 2022 \\ \mathrm{Aug}\ 2022 \end{array}$ 

# ADDITIONAL INFORMATION

Achivements: TESAT Grade 2, ADsP, Certification of Cody Joint Event(MATLAB)

Skills: Programming(C, Python, HTML, MYSQL, Latex), MS Office(PowerPoint, Excel), Mathematica, Premiere Rush Languages: Korean(Native), English(Intermediate)

Interests: Artifical Intelligence, Machine Learning, Monetary, Financial Market, Economics Recession, Heterogeneous-Agent Hobby: Table Tennis, Listening Music, Watching NBA

Strengths: Enthusiasm, Curiosity, Punctual, Trustworthiness, focused