Yeongjin **Gwak**

MACHINE LEARNING RESEARCHER · MACHINE LEARNING ENGINEER

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"Reinforcement learning could provide robust solutions for a broad range of complex problems."

Education

Seoul National University   *Seoul, S.Korea*

M.S. IN PHYSICS AND ASTRONOMY DEPARTMENT   *March 2015 - August 2020*

- Researched computational approaches to calculate ultra cold quantum states under the supervision of Prof. Uwe R. Fischer.
- Thesis: "Benchmarking the Multiconfigurational Hartree Method by the Exact Wavefunction of Two Harmonically Trapped Bosons with Contact Interaction"

KAIST(Korean Advanced Institute of Science and Technology)   *Daejeon, S.Korea*

B.S. IN PHYSICS   *February 2011 - February 2015*

- Studied the dynamics and properties of academic citation networks under the supervision of Prof. Hawoong Jeong.

Skills

Machine Learning	PyTorch, Tensorflow, Reinforcement Learning, Computer Vision, Time-Series Forecasting
MLOps	GCP, AWS, Kubernetes, Docker, MLFlow, Wandb, Optuna, Plotly
Programming	Python, C, OpenMPI, JavaScript, LaTeX
Languages	Korean, English

Experience

acrossB   *Seoul, S.Korea*

DATA SCIENTIST   *September 2022 - Present*

- Developed a machine learning system for business products on a global logistics platform, including model infrastructure.
- Conducted research on forecasting stochastic future retail sales considering promotion, new product releases, and cannibalization effects.
- Developed a design pattern that is widely usable on Machine Learning/Deep Learning applications.
- Developed a cloud-based system for model serving and monitoring.

Korea Trade Network   *Pangyo, S.Korea*

SOFTWARE ENGINEER   *May 2020 - September 2022*

- Developed a prototype for Decentralized Identity (DID) using the Kubernetes cluster.
- Developed a connection between cloud public certificate service and a browser certificate service based on Vanilla JS.

Extracurricular Activity

Samsung Smart TV Hacking Project (SysSec-GoN)   *Daejeon, S.Korea*

MEMBER   *March 2013 - February 2014*

- Investigated security risks on the Samsung's Smart TV with SysSec Lab advised by Prof. Yongdae Kim
- Demonstrated system vulnerabilities using Flash Player

Computer Emergence Response Team in KAIST   *S.Korea*

TEAM LEADER   *March 2013 - February 2014*

- Investigated security risks in the KAIST network system

GoN, Network Security Club in KAIST   *Daejeon, S.Korea*

MEMBER   *September 2011 - February 2015*

- Studied securities vulnerabilities in computer system and web service

Honors & Awards

DOMESTIC

2017	**2nd Place**,	Korea Super-Computing Challenge	*Ulsan, S.Korea*

Presentation

INCOGNITO Hacking Conference   *S.Korea*

Smartphone Game Hacking   *2012*

- Introduced hacking technique using binary patching and MIIT attack.

Personal Project

Trading Stock Market with A2C Algorithm   *S.Korea*

Personal   *2019 - 2020*

- Leveraged A2C algorithm to predict stock prices.
- Created stock trading environment and utilized to train stock agent