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Summary

[Finance Industry]

1. R&D on machine learning-based investment and asset management methodologies
2. R&D on AI-powered ESG rating and consulting

[Bio & Healthcare Industry]

1. Analysis omics data with deep learning
2. Integrated deep learning predict system based on medical image & gene expression data
3. Machine Learning-based Drug Response Prediction Study

[Semiconductor industry]

1. R&D of machine learning-based wafer non-destructive inspection algorithm.
2. R&D of computer vision-based display panel inspection algorithm

Experience

Machine Learning Researcher

Daishin Economic Research Institute

Sep 2020 - Present (2 years 2 months +)

Worked on applying machine learning technology to financial engineering and ESG evaluation services.

- Development of real-time news analysis system for ESG risk and classification
- Corporate equity structure visualization modeling
- Development of investment model based on machine learning model
- Media data-based enterprise ESG risk prediction
- Development of automatic collection and classification system for Fair Trade Commission deliberation and decision data

Artificial Intelligence Researcher

Theragen Bio

Apr 2018 - Sep 2020 (2 years 6 months)

I research & develop a.i based solution for omics , clinical, and medical image data.

- Predictive modeling based on genetic data.
- Predict patient drug responsiveness with clinical data.
- Classification of cancer types by medical image data.
- Classification of health status with microbiome data.



Research Engineer

Etamax

Nov 2015 - Apr 2018 (2 years 6 months)

R&D Semiconductor wafer non-destructive inspection.

Machine learning-based solution research.

Education



Kyushu University

Master of Engineering - MEng, Artificial Intelligence

2012 - 2015

Paper - Swarm Reinforcement Learning Algorithm with Characterized Agents

Reinforcement Learning , Optimization , System Design



Kyushu University

Bachelor of Engineering - BE, Electrical Engineering and Computer Science

2008 - 2012

Licenses & Certifications



How Google does Machine Learning - Google Cloud Training Online

QK8EF7ZBBN59



Launching into Machine Learning - Google Cloud Training Online

Y23EUA5M2VPP



Architecting with Google Kubernetes Engine: Foundations - Google Cloud Training Online

Z2S24HK6SC9W



Architecting with Google Kubernetes Engine: Workloads - Google Cloud Training Online

5GQPTV8RQJG7



Architecting with Google Kubernetes Engine: Production - Google Cloud Training Online

UPGCUXSC35FS



TensorFlow on Google Cloud - Google Cloud Training Online

ZXLK85Z74E2X



Feature Engineering - Google Cloud Training Online

5L95WEK9V6K4



Machine Learning in the Enterprise - Google Cloud Training Online

58XHK58ZMC9L



Production Machine Learning Systems - Google Cloud Training Online

Z9ARHV2JEEZP



End-to-End Machine Learning with TensorFlow on Google Cloud - Google Cloud Training Online

UYUSCW68U36J



Machine Learning on Google Cloud Specialization - Google Cloud Training Online

582ZT8UGBKHN

Skills

Artificial Intelligence (AI) • Machine Learning • Kubernetes • MLOps • PyTorch • TensorFlow • Deep Learning • Python (Programming Language)

Honors & Awards



[2nd place] Gimhae Fire Prediction Competition - Korea Land and Housing Corporation (LH)

Dec 2019

The city of Gimhae intends to contribute to the efficient distribution of administrative power by converging firefighting and building-related information to analyze and predict the fire risk in the region, and use it to conduct intensive and active fire prevention activities.

I use firefighting and building-related data collected by Gimhae City to present a fire risk analysis and prediction model for buildings.



[2nd place] CTD-squared Pancancer Drug Activity DREAM Challenge - Columbia University, Sage Bionetworks, NIH/NCI, CTD2, Mount Sinai School of Medicine, Heidelberg University, Semmelweis University

Apr 2020

The goal of the CTD2 Pancancer Drug Activity DREAM Challenge is to foster the development and benchmarking of algorithms to predict targets of chemotherapeutic compounds from post-treatment transcriptional data.

I developed a machine learning model to predict drug responsiveness from genetic data. First, dimensionality reduction modeling of genetic data was performed. Second, we studied drug responsiveness predictive modeling with reduced genetic data.