Yoshihiro Hori

EXPERIENCE

AI Engineer - SyntheticGestalt, Tokyo, Japan

2025.02 - Present

- Applied topological data analysis (TDA) on chemical space to build predictive models

Research Engineer - SyntheticGestalt, Tokyo, Japan

2020.06 - 2025.02

- Built an internal system for running model inference at scale using Ray and RayDP
- Built ADMET prediction models for National Institutes of Biomedical Innovation, Health and Nutrition (NIBIOHN) and their service **DruMAP**
- Built a competitive compound property prediction model for **SIGNATE** and won the 3rd place as a team
- Built a declarative PyTorch model training framework using SageMaker
- Built a video classification model supporting incremental class addition without performance degradation

Software Engineer - Freelance, Kyoto, Japan

2016.09 - 2020.09

- Developed vision models for a video classification task
- Deployed survailance systems using network cameras
- Worked on tuning and configuring linux kernel for embedded devices
- Worked for a startup developing mesh networking software for IoT devices

Software Engineer - ExaIntelligence, Kyoto, Japan

2016.04 - 2016.09

- Built RC cars with cameras using Raspberry Pi
- Built a car-driving simulation environment for RL algorithms

Chemical Engineer Intern - BASF, Dusseldorf, Germany

2014.07 - 2014.09

- Optimized chemical processes by modeling and simulations

Summer Intern (iOS app development) - CyberAgent, Tokyo, Japan

2013.08 - 2013.09

- ・Developed an iOS fitness tracker app

EDUCATION

Doctor of Philosophy - PhD (Dropout), Chemical Engineering

2016.04 - 2016.09, Kyoto University, Kyoto, Japan

Collaborative Research Project, Chemical Engineering

2015.06 - 2015.09, Massachusetts Institute of Technology, Cambridge, MA, USA

Master of Engineering - MEng, Chemical Engineering

2014.04 - 2016.03, Kyoto University, Kyoto, Japan

Bachelor of Engineering - BEng, Engineering

2010.04 - 2014.03, Kyoto University, Kyoto, Japan

PUBLICATIONS

Multiscale DSA simulations for efficient hotspot analysis

2014, SPIE Proceedings, Yoshihiro Hori, Kenji Yoshimoto, Takashi Taniguchi, Masahiro Ohshima