Daolang Huang

Finland | daolang.huang@aalto.fi | github.com/huangdaolang

EDUCATIONAL BACKGROUND

Aalto University, GPA: 4.91/5 (Major 5/5) Sept. 2020 - Present

- Master of Science in Machine Learning, Data Science and Artificial Intelligence (Macadamia)
- Honours Programme member in the Department of Computer Science
- SCI Dean's incentive scholarship 2021
- Aalto University Scholarship (100% tuition waiver)

Jinan University, GPA: 87/100 (Major 89/100) Sept. 2016 - July 2020

- Bachelor of Engineering in Computer Science and Technology
- First-class Scholarship for Outstanding Students of JNU, 2018

PUBLICATION

- **Huang, D.**, Filstroff, L., Mikkola, P., Zheng, R. & Kaski, S. Bayesian Optimization Augmented with Actively Elicited Expert Knowledge. Submitted to *Conference on Uncertainty in Artificial Intelligence 2022* (UAI 2022).
- **Huang, D.** & Perez, R. F. Technical report. SSELDnet - A Fully End-to-End Sample-Level Framework for Sound Event Localization and Detection. In *IEEE AASP challenge on Detection and Classification of Acoustic Scenes and Events 2021* (DCASE 2021).
- Zheng, R., Zhang, Y., **Huang, D.** & Chen, Q. Sequential Convolution and Runge-Kutta Residual Architecture for Image Compressed Sensing. In *European Conference on Computer Vision 2020* (ECCV 2020).
- Zheng, R. & **Huang**, **D.** Convolutional Compressed Learning with Knowledge Distillation.

RESEARCH

Master Thesis: Human-in-the-Loop Bayesian Optimization Oct. 2021 - Present

- Proposed Preferential Bayesian Neural Network (PBNN) for expert knowledge elicitation by learning instance preference actively
- Presented an expert knowledge-augmented Bayesian optimization method with multi-task learning

Targeted-Aware Bayesian Active Learning June 2021 - Aug. 2021

- Developed a deep active learning system that transferred functional prior distribution from GP regression to Bayesian neural network for treatment effect prediction
- Improved decision-making under multi-objective problems

Sound Events Localization and Detection using Deep Learning Oct. 2020 - June 2021

- Proposed an end-to-end sample-level SELD framework which investigates the possibility to apply representation learning directly to the raw audio
- Achieved 6th in SELD challenge 2021, technical report accepted by DCASE 2021

Image Compressed Sensing Nov. 2019 - Aug. 2020

- Proposed Runge-Kutta Convolutional Compressed Sensing Network (RK-CCSNet) and achieved state-of-the-art performance in deep compressed sensing
- Proposed a sequential convolution structure that introduced structural prior for linear sensing and a novel residual architecture based on Runge-Kutta Method

Biochemical System Research May 2019 - July 2019

- Created a model that can replicate the behavior of the target system by quantitatively optimizing the kinetic rate to fit the concentration rate curve of the targeted biochemical reactant through the back-propagation technique
- Assumed the complex reactants in the synthetic model, found the potential reaction of the target biochemical system

WORK EXPERIENCE

Aalto University - Department of Computer Science Feb. 2022 - Present

- Teaching assistant of course "Deep Learning"
- Responsible for holding TA sessions and Q&A in Slack channel

Aalto University - Department of Computer Science Oct. 2021 - Present

- Master thesis worker of Probabilistic Machine Learning Group (PML)
- Supervisor: Prof. Samuel Kaski
- Topic: Human-in-the-Loop Bayesian Optimization

Aalto University - Department of Computer Science June 2021 - Aug. 2021

- Summer intern of Probabilistic Machine Learning Group (PML)
- Supervisor: Prof. Samuel Kaski
- Topic: Targeted-aware Bayesian active learning

Jinan University - University of Birmingham Joint Institute at JNU Feb. 2020 - June 2020

- Teaching assistant of course "C Programming"
- Responsible for assignment correction and Q&A section

Neuedu Education Technology Co., Ltd. June 2019 - Aug. 2019

- Summer intern, Python developer
- Collaborated with teammates to develop some web crawler projects using Scrapy

SKILLS & LANGUAGES

- **Programming Language**: Python, Java, C, R, C++
- **Specialized Skills**: Machine learning, Deep learning, Computer vision, Audio information retrieval
- **Packages**: PyTorch, Keras, TensorFlow, Scikit-learn
- **Language**: English (C1), Mandarin (native)