

TAKEHIKO OHKAWA

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RESEARCH INTERESTS

Computer Vision, Deep Learning and Machine Learning
(Deep Generative Models, Reinforcement Learning, Visual Forecasting, and First-Person Vision)

EDUCATION

The University of Tokyo (UTokyo) *April 2020 -*
M.A.S. in Graduate School of Interdisciplinary Information Studies
Advisor: Yoichi Sato, Jun Rekimoto

Tokyo Institute of Technology (TokyoTech) *April 2017 - March 2020*
B.E. in Computer Science (for 3 years the fastest record)
GPA: 3.93/4.00
Ranked 1st out of 4 early graduates in class.
Thesis: *Augmented Cyclic Consistency Regularization for Unpaired Image-to-Image Translation*
Advisor: Nakamasa Inoue

PROJECTS

cvpaper.challenge, AIST *February 2019 - Present*
A student researcher of cvpaper.challenge, which is a comprehensive survey and collaborative research project in the field of computer vision and pattern recognition, principally investigated by Dr.Hirokatsu Kataoka in the National Institute of Advanced Industrial Science and Technology (AIST). A paper "Augmented Cyclic Consistency Regularization for Unpaired Image-to-Image Translation" is published.

DGM Spring Seminar, Matsuo Lab, UTokyo *March 2020 - April 2020*
Researched and implemented several algorithms in deep generative models (DGM), including GAN, VAE, Flow, and Energy-based model, advised by Prof.Yutaka Matsuo.

Toxicity Prediction, Sekijima Lab, Tokyo Tech *May 2019 - August 2019*
Conducted a research project for toxicity prediction using deep learning advised by Prof.Masakazu Sekijima. I designed graph convolutional neural networks for analyzing the structure of chemical compounds and the toxicity.

Speech & Vision, Shinoda Lab, Tokyo Tech *February 2019 - October 2019*
Researched on deep generative models for graphic use, advised by Prof.Koichi Shinoda and Prof.Nakamasa Inoue. Moreover, I participated in group reading for speech recognition and computer vision. I made a presentation for stabilization techniques for GANs.

Alpha"Othello" Zero *October 2018 - January 2019*
Conducted an advanced research project in the class of "Artificial Intelligence" at Dept. Computer Science advised by Prof.Koichi Shinoda. I proposed a small- sized AlphaZero algorithm and experimented with it in the Othello game.

NLP Summer Seminar, Matsuo Lab, UTokyo *August 2018 - September 2018*
Researched and implemented several algorithms in natural language processing (NLP) and deep learning advised by Prof.Naoaki Okazaki, Prof.Yoshimasa Tsuruoka and Prof.Yutaka Matsuo. I ranked within the top 10th in a machine translation competition.

NLP Seminar, Okazaki Lab, Tokyo Tech *March 2018 - August 2018*
Implemented fundamental algorithms of natural language processing and machine learning, and reviewed the codes with each other, advised by Prof.Naoaki Okazaki.

PUBLICATIONS

Pre-Print

Augmented Cyclic Consistency Regularization for Unpaired Image-to-Image Translation

Takehiko Ohkawa, Naoto Inoue, Hirokatsu Kataoka, Nakamasa Inoue

<https://arxiv.org/abs/2003.00187>

WORK EXPERIENCE

Neural Pocket Inc.

October 2019 - May 2020

Researcher Internship

Researched on pixel-based domain adaptation for face recognition.

Department of Computer Science, TokyoTech

August 2019 - March 2020

Research Assistant

Worked on large-scale computing experiments using a series of supercomputers at TokyoTech, Tsubame3.0., advised by Prof. Nakamasa Inoue.

teamLab Inc.

August 2019

Engineer Internship

Researched on an artistic generation using computer vision techniques and created artwork in the interactive and computer vision team.

Cross Compass Ltd.

December 2017 - November 2018

Researcher Internship

Researched on visual pattern recognition, deep generative models, and reinforcement learning.

AWARDS & GRANTS

JEES/Softbank AI Scholarship

April 2020 - March 2021

Tokio Marine Kagami Memorial Foundation Scholarship

April 2018 - March 2020

EXTRA-CURRICULAR

Founder, Artificial Intelligence Student Research Community *deeplab* at Tokyo

April 2019 - Present

Established a student research community for artificial intelligence, associating with ML, DL, CV, NLP, RL, Speech, HCI and Neuroscience.

Survey of Image-to-Image Translation

October 2019

Presented a broad survey of image-to-image translation at DeNA Co., Ltd.

Survey of Reinforcement Learning and GANs

February 2019

Presented a meta survey of reinforcement learning and GANs at Waseda University.