

OBJECTIVE

- To participate in a Machine Learning related position with an applied research component. A strong interest in Computer Vision related topics and projects. A solid background in CS and sufficient experiences in Machine Learning research.

EDUCATION

MSc in Applied Computing GPA:4.0/4.0

September 2022 – December 2023 (expected)

University of Toronto, Department of Computer Science

Courses: Introduction to Machine Learning (A+), Computational Imaging (A+), Neural Networks and Deep Learning (A+), Natural Language Computing (A+)

B.S. in Computer Science and Technology GPA:3.77/4.0

September 2018 – June 2022

Beijing Institute of Technology, School of XuTeli

EXPERIENCE

ModiFace, Toronto, Canada

May 2023 – Present

Machine Learning Intern

- Conducted literature review, reproduced existing methods, and made research proposals.
- Proposed and implemented novel machine learning algorithms, carried out extensive experiments and demonstrated our method outperforming existing SOTA by a large margin.
- Aiming for publications at top-tier computer vision conferences as the first author.

Beijing Institute of Technology, Beijing, China

December 2021 – May 2022

Undergraduate Graduation Design: *Research on Domain Generalization Image Classification Based on Gaussian Kernel*

- Proposed a novel method addressing the domain generalization image classification problem by utilizing gaussian kernel to extract the high-frequency information from the image, and implemented this method with PyTorch.
- Achieved 6.2% and 4.52% mean classification accuracy improvement on Digits-DG and PACS dataset respectively compared with the baseline method, which were competitive results compared to state-of-the-art methods.
- Wrote a thesis and defended it with five professors from the Department of Computer Science.

North Carolina State University, U.S.

July 2021 – August 2021

Remote Research Intern: *Balancing real-world inverted pendulums via virtual training with RL*

- Implemented Policy Gradient, Actor Critic, and Proximal Policy Optimization with PyTorch and successfully balanced the single inverted pendulum in a modified gym environment which provided a more realistic simulation of physical laws.
- Successfully balanced the double inverted pendulum by using Actor Critic in a modified gym environment.
- Directly applied our trained model in the gym to balance a real single inverted pendulum in the lab successfully.

COURSE PROJECT

University of Toronto, Toronto, Canada

November 2022 – December 2022

CSC2529 Computational Imaging: *Can Diffusion Model Generalize Well in Image Super Resolution with Limited Fine-Tuning?*

- Fine-tuned a pretrained SR3 model with limited update steps, amount of data and time steps on a new data domain which are unseen during pretraining.
- Verified the pretrained model's generalization ability qualitatively and quantitatively in terms of PSNR, SSIM and LPIPS.
- Wrote a report in a conference format and made a poster presentation.

TECHNICAL SKILLS

- Programming Languages: C, Java, Python (i.e. PyTorch), Matlab