Jingyi Xu

Jingyi.Xu.1@stonybrook.edu

RESEARCH INTERESTS

Transfer/Low-shot Learning, Adversarial Learning

EDUCATION

Stony Brook University, United States *Sep 2019 - Present*
Ph.D, Computer Science GPA : 4.0/4.0

Nankai University, China *July 2015 - June 2019*
B.S., Computer Science GPA : 90.3/100

PUBLICATION

Jingyi Xu, Hieu Le, Mingzhen Huang, ShahRukh Athar, Dimitris Samaras. **Variational Feature Disentangling for Fine-grained Few-shot Visual Recognition.** ICCV 2021.

Kai Zhao, **Jingyi Xu**, Mingming Cheng. **RegularFace: Deep Face Recognition via Exclusive Regularization.** CVPR 2019.

EXPERIENCE

***Research Intern* at NEC, CA** May 2021 - Aug 2021

· Aim to reduce the number of hard samples for face anti-spoofing.
· Generate adversarial features close to the hard features in the embedding space via the Fast Gradient Signed Method (FGSM).
· Improve the robustness of the face anti-spoofing model by fine-tuning it to classify the generated samples correctly.

***Research Intern* at SenseTime, Beijing** Dec 2018 - July 2019

· Introduce a feature generator to generate hard features by maximizing cross-entropy loss
· Fine-tune the recognition model to classify both the original features and the hard features correctly.
· Obtain discriminative features for verification via the proposed adversarial training.

***Research Intern* at Panasonic R&D Center, Singapore** September 2018 - December 2018

· Aim to improve face recognition model's performance on frontal-profile face image pairs.
· Propose a module capable of modeling the transportation between frontal-profile faces in feature space.

***Research Assistant* at University of Notre Dame, US** July 2018 - September 2018

· Construct a graphic model of R packages based on their dependency relationship.
· Evaluate the popularity of the packages according to the frequency imported by other packages.
· Build a web-app that can generate an interactive graph to illustrate the inter-connections between packages.

PROJECTS

Face recognition via exclusive regularization April 2018 - July 2018

· Propose a new regularization term to increase inter-class separability for face verification.
· Enlarge the cosine distance between an identity and its nearest neighbour in an embedding space.
· Achieve state-of-the-art performance on several face recognition benchmarks.

Few-shot Learning by Intra-class Variance Disentangling Dec 2019 - March 2020

· Propose a feature augmentation method for fine-grained few-shot classification.
· Disentangle the features into two parts, *i.e.*, class-specific features and intra-class variance features.
· Generate new features by augmenting the intra-class variance part only to preserve the class identity.
· Achieve state-of-the-art performance on three fine-grained few-shot datasets.

Zero-shot Learning via Learning Clusterable Features March 2020 - Aug 2020

· Project the real visual feature to a discriminative feature space supervised by classification loss and train a variational autoencoder to reconstruct them.
· Fine-tune the features first with Gaussian-Similarity Loss to derive a more clusterable feature space.
· Achieve state-of-the-art results on three widely used zero-shot learning datasets.

TECHNOLOGY SKILLS

Programming Languages	Python, C/C++, Java, MATLAB, LaTeX
Tools	Pytorch, Caffe

AWARDS

First Prize of Scholarship, Nankai University	2016, 2018
Second Prize of Scholarship, Nankai University	2017
First Prize, China Undergraduate Mathematical Contest in Modeling	2017
First Prize, China College Students Mathematics Competition	2016