Jiawei Zhao

Undergraduate, College of Computer Science and Technology
Nanjing University of Aeronautics and Astronautics
29 Jiangjun Road
Nanjing, China, 211106

jiaweizhao@nuaa.edu.cn
(+86)15366125967
https://github.com/PermiJW

EDUCATION

- **Nanjing University of Aeronautics and Astronautics**
  BE, Computer Science and Technology (expected June 2019) *Sep. 2015 - Present*
  - Overall GPA: 3.68
  - Major GPA: 3.76
  - Ranking: 4/114
  - Core Courses: C++ Programming (97), Pattern Recognition (94), Computer Algorithm Design and Analysis (91), Probability and Mathematical Statistics (97), Computer Vision (90), Computer Organization (95)

PUBLICATIONS

- Jeremy Bernstein*, **Jiawei Zhao***, Kamyar Azizzadenesheli, Anima Anandkumar, *"signSGD with Majority Vote is Communication Efficient and Byzantine Fault Tolerant"*, Seventh International Conference on Learning Representations **(ICLR'19)**, New Orleans, United States, May 2019 (Under Review) (*equal contribution)
- Shengjun Huang, **Jiawei Zhao**, Zhaoyang Liu, *"Cost-Effective Training of Deep CNNs with Active Model Adaptation"*, Proc. of 2018 ACM SIGKDD Int. Conf. on Knowledge Discovery and Data Mining **(KDD'18)**, London, United Kingdom, August 2018

RESEARCH EXPERIENCE

- **SignSGD with Majority Vote in Large-Scale Deep Learning**
  California Institute of Technology *Apr.2018 - Oct.2018*
  Advisor: Prof. Animashree Anandkumar
  - Proposed a novel distributed training system with signSGD that can reduce time cost of communication between machines and accelerate convergence performance.
  - Realized a 25% reduction in time for training resnet50 on ImageNet when using 15 AWS p3.2xlarge machines, compared with the state-of-the-art Nvidia Collective Communications Library (NCCL).
  - Led to a manuscript submitted to ICLR 2019.
- **Cost-Effective Training of Deep CNNs with Active Model Adaptation**
  Nanjing University of Aeronautics and Astronautics *Nov.2017 - Feb.2018*
  Advisor: Prof. Shengjun Huang

- Actively adapted a pre-trained model to a new task with less labeled examples without redesigning the network architecture.
- Implemented it on the datasets of PASCAL VOC2012, CVPR Indoor, DOGvsCAT and INRIA Person with the pre-trained model of Alexnet, VGG-16 and Resnet-18, respectively
- Consistently outperformed the random sampling method in terms of both classification accuracy and AUC.
- Published a paper that was accepted by ACM SIGKDD 2018.

- **Facial Attributes Detection**
  Nanjing University of Aeronautics and Astronautics *Jun.2017 - Aug.2017*
  Advisor: Prof. Liyan Zhang
  - Trained a model for facial attributes detection on the Large-scale CelebFaces Attributes dataset.
  - Implemented the model based on a pre-trained Inception-V3 model and tuned it for target training dataset.
  - Won the College Students Innovation Excellence Award (Top 6%).

- **Large-Scale Sentiment Analysis for News**
  Nanjing University of Aeronautics and Astronautics *Mar.2017 - May.2017*
  Advisor: Prof. Shengjun Huang
  - Trained a model for sentiment analysis of the Sougou Lab News dataset.
  - Proposed a model inspired by Hierarchical Attention Networks proposed by the paper of "Hierarchical Attention Networks for Document Classification".
  - Successfully achieved 83.44% valid accuracy.

SCHOLARSHIPS

Principal Excellent Scholarship, NUAA (Top 12 out of 31,000) 2018
First Prize, University Encouragement Scholarship, NUAA (Top 1%) 2016, 2017
Academic Excellence Scholarship, NUAA (Top 1%) 2016

AWARDS AND HONORS

First Prize Innovation Award, NUAA (Top 17 out of 31,000) 2018
Merit Student, NUAA (Top 5%) 2017
Excellent Award, College Students Innovation Project (Top 6%) 2017
Excellent Student Cadre, NUAA (Top 5%) 2016
Excellent Prize, Summer Social Practice Project (Top 10%) 2016

OTHER SKILLS

Top Skills: Python, C/C++, Java, MATLAB, R, SQL
Tools: Visual Studio, Xcode, LATEX