Zangwei Zheng

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No.163 Xianlin Avenue, Nanjing, Jiangsu Province, China (210023)

EDUCATION

Nanjing University Sept. 2017 – June 2021
B.S. in Computer Science and Technology, National Elite Program of Computer Science *Jiangsu, China*

- **GPA:** 4.61/5.00 (92.2/100) **Rank:** 4th/204 **TOEFL:** 105 **GRE:** V160+Q170+3.5
- **Highlight Courses:** *Problem Solving (94, 4-semester course covering Discrete Mathematics, Data Structures, Algorithm Design and Analysis etc.), Intro to Computer Systems (96), Operating Systems (98), Compiler (96), Intro to Machine Learning (94), Advanced Algorithms (92), Combinatorics (94), Quantum Computation (95)*
- **Teaching Assistant:** Course of *Algorithm Analysis and Design, Fall 2020*

National University of Singapore Aug. 2021 – June. 2026 (expected)
Ph.D in School of Computing *Singapore*

- Program starts in 2021 Fall, under supervision of **Yang You**

RESEARCH EXPERIENCE

University of California, Berkeley (iCyPhy, DOP Center) Apr. 2020 – Present
Research Intern, supervised by Prof. Alberto Sangiovanni-Vincentelli & Dr. Xiangyu Yue *CA, US*

- **Few-shot Domain Adaptation via Self-supervised Learning with Clustering**
  - Revealed performance deterioration of existing methods due to lack of labels in few-shot domain adaptation.
  - Incorporated clustering property of datasets to construct self-supervised loss – more specifically, contrastive loss between instances and centroids of clustering both in the same and different domains.
  - Proposed to better align different domains with high-confident instances and mutual entropy maximization.
- **Diverse Autonomous Driving Scene Generation**
  - Proposed training on different styles of images to mitigate simulation-to-real world domain shift.
  - Incorporated Implicit Maximum Likelihood Estimation (IMLE) to generate diverse simulation driving scenes across different domains.
- **Covid-19 C3.ai Project: Detection and Containment of Emerging Diseases Using AI Techniques**
  - Extended multi-modality learning methods for X-ray, CT and MRI data in real world scenario.
  - Proposed self-supervised methods to mitigate the problem of lack of labels in the medical domain.

Nanjing University (LAMDA) June 2019 – Jan. 2020
Research Intern, supervised by Prof. Ming Li *Jiangsu, China*

- **Deep Forest for Matching Problem**
  - Extended Deep Forest (deep learning model other than neural network) to information retrieval problem.
  - Incorporated co-clustering results in query words and texts for the supervised training of Deep Forest.

PUBLICATIONS

1. **Prototypical Cross-domain Self-supervised Learning for Few-shot Unsupervised Domain Adaptation** Xiangyu Yue*, **Zangwei Zheng***, Shanghang Zhang, Yang Gao, Trevor Darrell, Kurt Keutzer, Alberto Sangiovanni-Vincentelli **CVPR 2021**
2. **Scene-aware Learning Network for Radar Object Detection**
   Zangwei Zheng, Xiangyu Yue, Kurt Keutzer, Alberto Sangiovanni Vincentelli **ICMR 2021**

SKILLS

Languages	Python, C, C++, MATLAB, Assembly, Verilog
Frameworks	PyTorch, TensorFlow 2, OpenCV, Scikit-learn, NumPy, Qt
Tools	Git, SQL, Slurm, LaTeX, reST