YAN PAN

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EDUCATION

Carnegie Mellon University
B.S. in Computer Science, 2019 – 2023 (expected)
- Concentration in Machine Learning, Minor in Mathematical Sciences

Tsinghua University
Host Institution Program, 2021

RESEARCH INTEREST

- Theoretical foundations of deep learning, reinforcement learning, and representation learning.
- Optimization for machine learning, non-convex optimization, and online optimization.
- Applications of multimodal machine learning, computer vision, and natural language processing.
- Privacy and fairness of machine learning algorithms.

RESEARCH EXPERIENCE

Carnegie Mellon University MultiComp Lab
Undergraduate Research Assistant, 2021
- Advisors: Louis-Philippe Morency, Paul Liang.
- Researched multimodal machine learning for multimodal social interations. Experimented with state-of-the-art language models, visual-linguistic models, and multimodal attention mechanisms on egocentric datasets. Working on designing reinforcement learning algorithms to increase interactivity.
- Funded by *Summer Undergraduate Research Fellowship*.
- Documents: SURF Proposal

HONORS & AWARDS

- Summer Undergraduate Research Fellowship ($3500), Carnegie Mellon University, 2021
- Dean's List, High Honors, CMU School of Computer Science, Fall 2019 – Spring 2021
- Global Finalist, Shing-Tung Yau High School Science Award – Computer Award, 2018
- Finalist, International Mathematical Modeling Challenge International Contest, 2018
- Outstanding, International Mathematical Modeling Challenge Greater China Contest, 2018

TEACHING EXPERIENCE

High School Affiliated to Renmin University of China
Co-Instructor
- Mathematical Modeling and Application, Spring 2019
  Topics: Applications of optimization, graph theory, differential equations, clustering, and basic machine learning in mathematical modeling.

SELECTED COURSEWORK

Carnegie Mellon University († PhD level)
- Convex Optimization†
- Introduction to Machine Learning†
- Special Topics in Theory: Algorithms for Big Data†
- Algorithm Design and Analysis
- Great Ideas in Theoretical Computer Science
- Computational Photography

- Computer Vision
- Computer Graphics
- Probability
- Principles of Real Analysis I

Other Institute

- Formal Languages and Automata (Tsinghua University)
- Machine Learning (Coursera, Stanford University)

SKILLS

Programming Languages	Python, C++, C, MATLAB, Standard ML, Haskell, Java
Platforms	PyTorch, TensorFlow, Keras, Scikit-Learn, OpenCV, OpenGL
Software Tools	LaTeX, Git, Vim
Natural Languages	English (Proficient), Mandarin Chinese (Native)

Last updated: June 16, 2021