

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.
- ◊ Applications of multimodal machine learning, computer vision, and natural language processing.
- ◊ Convex and non-convex optimization for machine learning.

RESEARCH EXPERIENCE

Carnegie Mellon University MultiComp Lab

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

Peking University Institute of Remote Sensing and GIS

Student Researcher, 2018
◊ Researched deep learning methods for geographical big data.

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
- ◊ First Prize, DengFeng Cup National High School Academic Contest – Data Mining, 2017

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

- ◊ Convex Optimization (PhD)
- ◊ Introduction to Machine Learning (PhD)

- Multimodal Machine Learning (PhD)
- 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	L ^A T _E X, Git, Vim
Natural Languages	English (Proficient), Mandarin Chinese (Native)

Last updated: June 2, 2021