

# YAN PAN

4500 Centre Ave ◊ Pittsburgh, PA 15213  
(412)-897-9799 ◊ ypan2@andrew.cmu.edu ◊ panyan7.github.io

## EDUCATION

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### **Carnegie Mellon University**

B.S., Computer Science, 2019 – 2023 (expected)

- Concentration in Machine Learning, Minor in Mathematical Sciences

### **Tsinghua University**

Host Institution Program, 2021

## RESEARCH INTEREST

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- Deep Learning Theory
- Reinforcement Learning
- Non-Convex Optimization
- Multimodal Machine Learning

## RESEARCH EXPERIENCE

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### **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

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- 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

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### **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

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### **Carnegie Mellon University**

- Convex Optimization (*PhD*)

- Introduction to Machine Learning (*PhD*)
- Great Ideas in Theoretical Computer Science
- Computer Vision
- Computer Graphics
- Parallel & Sequential Data Structures and Algorithms
- Introduction to Computer Systems
- Probability
- Principles of Real Analysis I

#### **Other Institute**

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

## **SKILLS**

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<b>Programming Languages</b>	Python, C++, C, MATLAB, Standard ML, Haskell, Java
<b>Platforms</b>	PyTorch, TensorFlow, Keras, Scikit-Learn, OpenCV, OpenGL
<b>Software Tools</b>	L <sup>A</sup> T <sub>E</sub> X, Git, Vim
<b>Natural Languages</b>	English (Proficient), Mandarin Chinese (Native)

Last updated: May 31, 2021