Yan Pan

Undergraduate Student - School of Computer Science - Carnegie Mellon University

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Education

B.S. in Computer Science, Carnegie Mellon University

Minors in Machine Learning & Mathematics **QPA: 3.95/4.0**

Aug 2019 – May 2023 Pittsburgh, PA

The High School Affiliated to Renmin University of China

Early Development Program

Sep 2012 – Jul 2019 Beijing, China

Experience

Undergraduate Researcher, CMU MultiComp Lab

Jan 2021 - Present Pittsburgh, PA

- Working on multimodal machine learning at CMU MultiComp Lab.

Student Researcher, Peking University

Jun 2018 - Dec 2018 Beijing, China

- Conducted research at Institute of Remote Sensing and Geographical Information Systems at Peking University.
- Analyzed & visualized spatial-temporal features of shared bike distribution.
- Implemented deep learning model based on LSTM to predict the demand for shared bikes.

Student Instructor, The High School Affiliated to Renmin University of China

Jan 2019 - Jun 2019 Beijing, China

- Co-instructed a full semester elective course Mathematical Modeling and Application for high school students in Spring 2019.
- Taught lectures and designed course materials in optimization, clustering, differential equation, graph theory, and case studies.

Projects

Music Generation with Deep Learning

Oct 2020 – Jan 2021 Pittsburgh, PA | GitHub

- Designed and implemented deep learning architecture based on LSTM and RBM from scratch in PyTorch to generate realistic classical piano music.

Modeling Complex Systems – Dynamics of Social Gatherings

Sep 2019 – Dec 2019 Pittsburgh, PA

- Constructed simulation model of the formation and dissolution of social gatherings in NetLogo.

Coursework

- Convex Optimization* (PhD)
- Machine Learning (PhD)
- Computer Vision*
- Computer Graphics*
- Data Structures and Algorithms
- Theoretical Computer Science
- Computer Systems

(*: Ongoing)

Skills

Programming Languages

Python | C++ | C | SML | matlab | Haskell | Java

Libraries & Frameworks

PyTorch | TensorFlow | Keras | sklearn | OpenGL | OpenCV

Platforms & Tools

LaTeX | Linux | Git | Vim

Honors & Awards

★ **Candidate Master, Codeforces (Max Rating: 1928, Top 5%)**
Jan 2021

★ **Dean's List, High Honors**
Fall 2019 – Fall 2020

★ **First Prize, Shing-Tung Yau High School Academic Award – Computer Award**
Dec 2018

★ **Finalist, International Mathematical Modeling Challenge, International Contest**
May 2018

★ **Outstanding, International Mathematical Modeling Challenge, Greater China**
May 2018

★ **DengFeng Cup National High School Academic Contest – Data Mining**
July 2017