Yan Pan

Undergraduate Student - School of Computer Science - Carnegie Mellon University

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Education

B.S. in Computer Science, Carnegie Mellon University
Minor in Machine Learning & Mathematics   **QPA: 3.95/4.0**

📅 August 2019 – May 2023   📍 Pittsburgh, PA

The High School Affiliated to Renmin University of China
Early Development Program

📅 September 2012 – July 2019   📍 Beijing, China

Experience

Student Researcher, Peking University

📅 June 2018 - December 2018   📍 Beijing, China

- Conducted research at Institute of Remote Sensing and Geographical Information Systems at Peking University.
- Analyzed and visualized spatial and temporal features of shared bike distribution.
- Designed and implemented LSTM model in Keras to predict the demand for shared bikes.

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

📅 January 2019 - July 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

📅 October 2020 – January 2021   📍 Pittsburgh, PA | GitHub

- Studied generative deep learning models for automated generation of classical piano music.
- Designed and implemented LSTM-RBM model from scratch in PyTorch for randomized chord pitch generation.
- Implemented chord duration prediction with generated pitch using LSTM that resulted in more diversified and realistic rhythms.

Modeling Complex Systems – Dynamics of Social Gatherings

📅 September 2019 – December 2019   📍 Pittsburgh, PA

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

BestMoment (TartanHacks 2020)

📅 February 2020   📍 Pittsburgh, PA | GitHub

- Implemented face detection, face alignment, and similarity detection in OpenCV to automatically extract screenshots in video.

Selected Coursework

- Machine Learning (Graduate)
- Data Structures and Algorithms
- Theoretical Computer Science
- Computer Systems
- Real Analysis, Probability
- Competition Programming

Skills

Programming Languages:
- Python, C++, C
- Standard ML, matlab, Haskell

Libraries & Frameworks:
- PyTorch, TensorFlow, Keras
- OpenGL, OpenCV

Platforms & Software Tools:
- LaTeX, Markdown
- Linux, Git, Vim

Honors & Awards

Dean's List, High Honors

📅 Fall 2019 – Fall 2020

First Prize, Shing-Tung Yau High School Academic Award – Computer Award

📅 December 2018

Finalist, International Mathematical Modeling Challenge, International Contest

📅 May 2018

Outstanding, International Mathematical Modeling Challenge, Greater China

📅 May 2018

DengFeng Cup High School Academic Contest – Data Mining

📅 July 2017