

Yuwei Wu

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EDUCATION

University of Pennsylvania

Sep 2019 - May 2021

- Master of Science in Engineering, Systems Engineering

Philadelphia, PA

Coursework: Statistics for Data Science, Optimization, the Theory of Computation

Beijing Jiaotong University

Sep 2015 - Jun 2019

- Bachelor of Engineering, Transportation Engineering

Beijing, China

Coursework: C Programming, Operational Research, Management Information Systems

Israel Institute of Technology

Jul 2018 - Aug 2018

- Summer Program in Machine Learning

Haifa, Israel

The Hong Kong Polytechnic University

Sep 2018 - Dec 2018

- Exchange Program Certificate in Industrial and Systems Engineering

Hong Kong

Coursework: Data Management in Aviation, Simulation of Logistic Systems, E-business Technology

TECHNICAL SKILLS

- | | |
|---|---|
| ▪ Language: Python, C++, C, Matlab | ▪ Frameworks: PyTorch, scikit-learn, ReactJS, Django |
| ▪ Web based: JavaScript, HTML, CSS | ▪ Platforms: Linux (Ubuntu) |
| ▪ Simulation: Carla, Synchro, Vissim | ▪ Others: MySQL, Docker, Git, AWS |

WORK EXPERIENCE

Penn Wharton Budget Model *Research Assistant*

Oct 2019 - present

Skills: Python programming, Data pipeline

- Build tools for verification of updated data, discovery of data inconsistency and correction in USAFacts

UISEE Technology, a self-driving development company

Algorithm Engineer Intern

Dec 2018 - Apr 2019

Skills: C++ and Python programming, Linux, Research, Code packaging

- Improved an object assignment algorithm for tracking trajectories
- Developed an evaluation tool for performance of different algorithms and reported leak detection on daily logs
- Implemented feature analysis on lidar data to repair errors on parameters and keep consistence of object IDs

Undergraduate Physicists' Program

Research Assistant

Oct 2016 - Aug 2017

Skills: numerical analysis on Matlab, model simulation

- Implemented experiments to analyze the chaotic phase synchronization of coupled metronome systems
- Won the Second Prize of the 8th China Undergraduate Physicists' Tournament
- Won the First Prize of the 10th Undergraduate Physical Experiment Competition of Beijing
- Awarded the Science Innovative Talent by the School of Science

ACADEMIC PROJECTS

UPennalizers (RoboCup Team) Real-Time Robot Detection

Sep 2019 - present

- Improve the vision systems for Nao robots considered occlusion and lighting variance, develop robot detection using PyTorch on YOLO based network architecture.

Graduation Thesis: High-Speed Railway EMU Circulation Plan Optimization

Jan 2019 - Jun 2019

- Designed an extended ALNS algorithm for route planning problems (bi-level optimization) to improve the efficiency and resources utilization of high-speed railway systems

Systematic Optimization of Reservation App for Locked Shipping Containers

Mar 2017 - Apr 2018

Team leader, national undergraduate innovation project

- Improved a hybrid heuristic algorithm for the logistics and distribution of shipping containers and developed an Android application for users' reservation of containers
- Won the Second Prize of the 7th Transportation Technique Competition of Beijing

International Interdisciplinary Contest of Modeling

Dec 2017 - Feb.2018

- Improved a revised particle swarm algorithm in python to optimize the traffic network distribution at toll plazas
- Awarded the Honorable Mention of 2018 Mathematical Contest in Modeling Certificate of Achievement

HONORS AND ACHIEVEMENTS

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|---|-------------|
| ▪ National Scholarship, Merit Student, and First Prize of Academic Scholarship | 2015 - 2017 |
| ▪ First Prize of the 8 th Undergraduate Mathematics Competition of China | 2016 |
| ▪ First Prize of the 33 rd Undergraduate Physical Competition in China | 2016 |