

JIAYI PAN

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Education

University of Michigan, Ann Arbor

Bachelor of Computer Science - College of Engineering

Sep. 2021 – Aug. 2023 (Expected)

Ann Arbor, Michigan, U.S.A.

- Admitted Transfer Student

Shanghai Jiaotong University

Bachelor of Electrical and Computer Engineering - UM-SJTU Joint Institute

Sep. 2019 – Aug. 2023 (Expected)

Shanghai, China

- **GPA:**3.84/4.00 **Ranking:** 7/242
- **Selected Courses:** Intro to Computer & Programming (A), Programming and Intro Data Structures (A-), Honor Mathematics(A-,A,A), Discrete Math (A), Probabilistic Methods(A), Machine Learning (Online, Coursera by Andrew Ng), Reinforcement Learning (Online, UCL), Computer System (Online, CMU), Structure and Interpretation of Computer Programs (Online, MIT), The Quest for Consciousness (Reading), etc.
- **Honors:** Fan Hsu-Chi Scholarship (2020, top 0.1%), Tang Jun Yuan Scholarship (2021, top 1%), The John Wu and Jane Sun Excellence Scholarship (2020, top 1%), Chun-Tsung Research Aid (2020), etc.

Research Experience

SJTU Advanced Network Lab

Reserch Assistant

Apr 2020 – Present

Shanghai Jiaotong University, Shanghai

- Developing a method to combine knowledge distillation, meta-learning, offline reinforcement learning with the RNN neural architecture search algorithm to make model architecture search more scalable and efficient, enabling personally-tuned models over different edge devices. Now working on experiments.
- Collaborated on a research project to implement model-agnostic meta-learning on federated learning framework to enable edge devices have personal models.

Selected Projects

Hush the Buzz | Python | 2021 The Mathematical Contest in Modeling

Feb. 2021

- A multimodal analysis of the Asian Giant Hornet utilizing natural language processing, image classification and geographic information to predict the spread of this pest and sort future sightings by priority.
- Won MCM Honorable Mention Award.

Dice God | Python | Solo Developer

Oct. 2020

- A program to produce the optimal strategy for a dice game using reinforcement learning with Monte Carlo method.

Ray Tracer | Python | Solo Developer

January 2021

- A minimal ray tracer which supports diffuse illumination, specular lighting, shadows, reflection and refractions.

Meta Scheme | Scheme | MIT: Structure and Interpretation of Computer Programs

Jan. 2021

- A Scheme interpreter written in Scheme itself.

Modular Mars Rover | C++, Arduino | VG100 Introduction to Engineering

Sep. 2020

- A modular designed robotic car with slots to add various modules including camera, robotic arm, solar panels and Karaoke & Disco Lighting with a web-based control interface.

Relevant Skills

Programming/ Hardware Design Languages: Python, C, C++, Scheme(Lisp), JavaScript, Verilog, X64 Assemble.

Computer Software & Libraries: Pytorch, Mobile Neural Network, Linux, git, LaTeX, MATLAB, Mathematica, Vivado.

Languages: Chinese (native), English (proficient, TOEFL: 104)

Selected Extracurricular Activities

Driving towards Sustainability with Shared Electric Mobility

Aug. 2021

Author

SUST2021(ELS)

- A sustainability assessment case study of the time-sharing electric cars on Shanghai Jiao Tong University campus.
- The abstract have been accepted by International Conference on Sustainable Technology and Development for an oral presentation.

Wordsworth on Capitalism: Powerlessness

May 2021

Author

The Blue Tiger Review

- A literature review essay reconsidering the relationship between the Romantic poet, William Wordsworth, and the capitalist world.
- The essay have been published on *The Blue Tiger Review*.

UM-SJTU JI Young Volunteers Association

Dec 2019 – Jan 2020

Volunteer Teacher

Dali, Yunnan

- Taught local students English and trained local teachers with multimedia teaching for one month.