

Zhenyuan Zhang | Resume

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Education

University of Michigan

Bachelor of Science, GPA 4.0 out of 4.0

Major in Computer Science

Core courses: Computer Architecture, Data Structures and Algorithms, Operating Systems, Compiler Construction

University of Michigan – Shanghai Jiao Tong University Joint Institute

Bachelor of Science, GPA 3.6 out of 4.0

Major in Electronic and Computer Engineering

A level courses: Engineering Probabilistic Methods, Differential Equations, Linear Algebra, Discrete Mathematics

Experience

ARM Lab

Research Assistant

May 2020 – present

Implemented baseline algorithm based on Guided Policy Search for the Lab's novel model-based learning algorithm

WolverineSoft Studio Game Project

Unity Programmer

Sep. 2019 – Dec. 2019

A 2D platformer made by the University of Michigan's video game development club, featuring difficult platforming, tense combat, a high level of mobility granted to the player through teleportation abilities

- Worked over the course of one semester with a team of 30 developers
- Implemented the platformer player controller and save/load system
- Maintained the code base of procedure animation

Undergraduate Research Program

Student

Nov. 2018 – Apr. 2019

Spring 2019: Proof of Convergence of Quantile Q-learning

A variant of Q-learning that does not need quantified reward, but relative orders instead

- Proved with stochastic approximation technique

Fall 2018: Evaluation of Algorithms for Deep Reinforcement Learning

- Set up an unified environment that integrates different algorithms and scenarios
- Implemented reinforcement learning algorithms including PPO, DDPG and PILCO in TensorFlow
- Implemented a benchmarking procedure for algorithm evaluating

Activities and Honors

The 10th SJTU Mechanical Innovation Competition for Freshmen

Team Leader, Entered the second round

Mar. 2018 – Apr. 2018

A college-level competition in robot designing

Computer Skills

Programming Languages:

- **C++:** Have knowledge and skill of RAII, multi-threading and template metaprogramming
- **Rust:** Understand ownership, lifetime and type traits; Can write procedure macros
- **Python:** Train reinforcement learning agents; Do plot drawing

Tools: Git

Game Engines: Unity (C#), Amethyst (Rust)

Assets Creating: Blender for 3D modeling and animating