

# Yuxing (Rick) Wang

E-mail: [wyx20@mails.tsinghua.edu.cn](mailto:wyx20@mails.tsinghua.edu.cn)  
Website: <https://yuxing-wang-thu.github.io/>

## EDUCATION

### TSINGHUA UNIVERSITY

2020.09-2023.07(expected)

- *M.Sc. in Electronic Information Engineering*
- Cumulative GPA: **3.89/4.00**, Rank: **2/45**

### SOUTHWEST MINZU UNIVERSITY

2016.09-2020.07

- *B.Eng. in Communication Engineering with Highest Honors*
- Cumulative GPA: **3.86/4.00**, Rank: **1/145**

## PUBLICATIONS & PREPRINTS

- **Y Wang**, S Wu, H Fu, Q Fu, T Zhang, Y Chang, X Wang, Curriculum-based Co-design of Morphology and Control of Voxel-based Soft Robots, *International Conference on Learning Representations 2023 (under review)*, 2022.10
- T Zhang, Z Lin, **Y Wang**, D Ye, Q Fu, X Wang, X Li, Dynamics-Adaptive Continual Reinforcement Learning via Progressive Contextualization, *IEEE Transactions on Neural Networks and Learning Systems (under review)*, 2022.08
- **Y Wang**, T Zhang, Y Chang, X Wang, B Yuan, A Surrogate-Assisted Controller for Expensive Evolutionary Reinforcement Learning, *Information Sciences (Minor Revision)*, 2021.12
- **Y Wang**, B Yuan, From Big Data Based Price Discrimination to Privacy Leakage: Ethical Analysis and Reflections on Privacy Issues from the Perspective of Hardware and Software, *Science Economy Society*, 2021.10
- **Y Wang**, Y Jiang, A Weighted Minimum Distance Classifier Based on Relative Offset, *IEEE 4th International Conference on Cloud Computing and Big Data Analysis*, 2019.04

## RESEARCH EXPERIENCE

### 2022.08-Present *Research Intern: Quality-Diversity Optimization for Generating User-Preferred Game AI (ongoing)*

Tencent AI Platform Department      Funded by Tencent Rhino-Bird Research Elite Program

- Built a universal quality-diversity optimization tool that can generate task-specific diversity (for Game AI) defined by a set of user-specified Behavior Descriptors (BDs); Applied this tool to a variety of games such as “Honor of Kings” and “Auto Chess”.

### 2022.01-2022.07 *Research Intern: Brain-Body Co-Design of Modular Soft Robots*

Tencent AI Lab      Funded by Tencent Rhino-Bird Research Elite Program

- Constructed an efficient Curriculum-based Co-design framework (CuCo) for Voxel-based Soft Robots (VSRs), supporting end-to-end differentiable training; Created a new modular robot design space based on EvolutionGym.

### 2020.01-2021.12 *Project: A Matchup of Human versus Machine Intelligence*

Tsinghua University      Funded by Natural Science Foundation of China

- Constructed distributed Deep Q Networks (DQNs) and Evolutionary Strategy (ES); Established the overall training framework. The proposed agent model significantly bested the human-level players.

### 2018.08-2019.12 *Project: A Wearable Hand Rehabilitation Robot*

Southwest Minzu University      Funded by National Undergraduate Training Program of Innovation & Entrepreneurship

- Built a wearable hand rehabilitation robot for assisting patients to do rehabilitation training such as the flexion and extension of fingers; Fabricated the robot via 3D printing and debugged circuit; Built up a web server for collecting data.

### 2017.06-2018.06 *Competition: International Underwater Robot Competition, 2D Simulation League*

Southwest Minzu University-Peking University Joint Underwater Robot Lab

- Wrote the strategies based on C# to control 2D simulated fishes; Lead the group to win the *First Prize* in IURC 2017, 2018.

## AWARDS AND SCHOLARSHIPS

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| • National Scholarship   | 2017-2019 |
| • First Prize, International Underwater Robot Competition  | Jul. 2017 |
| • Honorable Mention, Mathematical Contest in Modeling  | Apr. 2018 |
| • First Prize in Central and Southwestern China Division, “TI Cup” National undergraduate IOT Design Contest | Aug. 2018 |
| • Bronze Award, National College Student Curricular Academic Science and Technology Works Competition        | Mar. 2019 |
| • Outstanding graduate of Sichuan Province   | Apr. 2020 |
| • 《PEOPLE’S DAILY》 Representative List of National Scholarship Winners for Undergraduate Students            | Apr. 2020 |

## ACTIVITIES / SKILLS / INTERESTS

- *Activities*: Vice president of the Students’ Robot Association and Mathematical Modeling Association (SMU), 2018-2020; Teaching assistant of “Data Mining” and “Ethics of Artificial Intelligence” (THU), Fall 2021.
- *Skills*: Python, Torch, TensorFlow, Latex, Linux, MS Office Suite, etc.; Teacher Qualification Certificate (Junior High School).
- *Interests*: Table tennis, voluntary work and bamboo flute.