Yuxing (Rick) Wang

E-mail: wyx20@mails.tsinghua.edu.cn
Website: https://yuxing-wang-thu.github.io/

EDUCATION

TSINGHUA UNIVERSITY *2020.08-2023.07(expected)*
• *M.Sc. in Electronic and 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 (Accepted), 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 (Accepted), 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 (Accepted), 2019.04*

RESEARCH EXPERIENCE

2022.05-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 Atari 2600 and "Auto Chess".

2022.01-2022.04 Research Intern: Brain-Body Co-Design of Voxel-based 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) for training RL agents; 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 the 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 control strategies based on C# for 2D simulated fishes; Lead the group to win the *First Prize* in IURC 2017, 2018.

AWARDS AND SCHOLARSHIPS

• 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 and MS Office Suite; Teacher Qualification Certificate (Junior High School).
• *Interests:* Table tennis, voluntary work and bamboo flute.