

YUNZHE WANG

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I'm intrigued by numerous aspects of Artificial Intelligence and Cognitive Science, particularly in Efficient Machine Learning including Transfer and Few-Shot Learning, Large Language Model, AI-Agent, and Brain Neural Decoding.

Since ChatGPT, I've been deeply contemplating the human-AI relationship: my excitement doesn't solely rest on the creation of AGI, but on ensuring AI trustworthiness and its potential to expedite scientific discovery.

EDUCATION

Columbia University (GPA: 3.96/4.00)

M.S. Computer Science, Machine Learning Track

New York, NY

Aug 2021 - May 2023

University of Southern California (GPA: 3.84/4.00)

B.S. Computational Neuroscience; B.A. Applied Mathematics; Minor Computer Science

Los Angeles, CA

Aug 2017 - May 2021

Relevant Coursework: Machine Learning, Unsupervised Learning, Natural Language Processing, Reinforcement Learning, Applied Computer Vision, Artificial Intelligence, Robotics, Cognitive Neuroscience, Sensation and Perception, Brain Architecture, Neurobiology, Cellular and Molecular Neuroscience, Statistics, Probability Theory, Numerical Methods, Calculus, Optimization, Computer Networks, Social Networks, Databases, Data Structure, Algorithm Analysis, Advanced Algorithms

EXPERIENCE

Bubble.io (No-Code - programming without code)

AI Resident

New York, NY

Jul 2023 - Present

- Generative AI research on text-to-web-application generation leveraging Large Language Model and Diffusion Model.

Creative Machines Lab at Columbia University

Student Researcher

New York, NY

Sep 2021 - May 2023

- Efficient Machine Learning research in Robotics with Prof. [Hod Lipson](#), Dr. [Boyuan Chen](#), and PhD Candidate [Yuhang Hu](#) on Transfer Learning, Model Generalization, and Multi-Modal Learning.
- Developed a face robot that can talk/conversate with human-like lips and facial movement and co-express (mimicry with negligible delay) facial expressions with humans.
- Developed a configurable 12-DOF quadruped robot that, given unseen morphology and controller configuration, it can 1) self-identify morphology through kinesthesia, and 2) zero-shot control to move forward.

USC Institute for Creative Technologies

Student Researcher

Los Angeles, CA

Jan 2020 - Aug 2021

- Machine Learning research with Dr. [Volkan Ustun](#) and Prof. [Paul Rosenbloom](#) on Cognitive Architecture, Reinforcement Learning, and Social AI-Agents.
- Developed route-optimization framework that provides real-time routing suggestions for TSP-like tasks to human search-and-rescue teams, leveraging Reinforcement Learning and Graph-Transformer.
- Software development for Graphical Models in the Sigma Cognitive Architecture (Symbolic AI).

Institute of Computing Technology, Chinese Academy of Science

Research Internship

Beijing, China

May 2019 - Aug 2019

- Natural Language Processing research for Chinese Part-of-Speech tagging system optimization.

PUBLICATION

Efficient Transfer Learning Across Robot Morphologies

Y. Hu, [Y. Wang](#), R. Liu, Z. Shen, H. Lipson.

Submitted to Conference of Robot Learning (CoRL 2023)

2022 - 2023

Lip Synchronization for Animatronic Robot Face

Y. Hu, [Yu. Wang](#), B. Chen, Yi. Wang, J. Lin, H. Lipson.

In Submission to Science Robotics

2021 - Present

Human-Robot Facial Co-expression

Y. Hu, B. Chen, J. Lin, [Yu. Wang](#), Yi. Wang, H. Lipson.

Science Robotics (In Revision)

2021 - 2023

Route Optimization in Service of a Search and Rescue Artificial Social Intelligence Agent

[Y. Wang](#), N. Gurney, J. Zhou, D. Pynadath, V. Ustun.

Association for the Advancement of Artificial Intelligence 2021 Fall Symposium Series (AAAI FSS 2021)

2020 - 2021

TEACHING EXPERIENCE

Applied Computer Vision (Teaching Assistant)	Spring 2023
Introduction to Natural Language Processing (Teaching Assistant)	Fall 2022
Introduction to Natural Language Processing (Teaching Assistant)	Summer 2022

AWARDS AND HONORS

USC Graduate with Distinction (Magna Cum Laude)	2021
USC Academic Achievement Award	2021
USC Dornsife Dean's List	2017 - 2021
MAA American Mathematical Contest 12 - top 5%	2016

SKILLS

Programming and Development: Python, C++, SQL, JavaScript/TypeScript, Git, LaTeX

Machine Learning and Data Science: PyTorch, TensorFlow, scikit-learn, Hugging Face, Tensor Programming, Web Scraping

Others: Bilingual in English and Chinese, Photography, Drawing, Culinary