Yuyang Zhou

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https://github.com/zhouyuyang2002

Profile

I am Yuyang Zhou. I am working for Deepseek as a deep learning research scientist in August, 2024. Before that, I got my bachelor's degree in 2024, from the Turing Class at the School of Electronic Engineering and Computer Science, Peking University

My research interests include physics-based character animation, large language models, competitive coding, software engineering, and code generation. I am intrigued by the potential connections between character animation and pre-trained large models, with the aim of enabling these models to guide the generation of motions. Also, I am interested in improving the code generation and analysis capabilities via large language models.

Areas of Expertise

Model free and Model Based Reinforcement Learning - Motion Synthesis and Generation - Diffusion Model - Algorithm Design - Data Analysis - Data generation

Education & Career

Deep Learning Research Engineer *Deepseek* **Beijing, China** *Aug 2024 - now*

Research interests: Code generation and Software engineering via large language model

BSc in Computer Science(GPA:3.784/4.00) *Peking Univsersity* **Beijing, China** *Sep 2020 - Jul 2024*

Relevant Courses: Analytical Mechanics, Mathematical Analysis, Advanced Algebra, Group Theory, Numerical Computation & Fundamentals of Programming.

High School degree *Shaoxing No.1 High School* **Shaoxing, China** *Sep 2017 - Jul 2020*

Publication

- MoConVQ: Unified Physics-Based Motion Control via Scalable Discrete Representations, Heyuan Yao, Zhenhua Song, **Yuyang Zhou**, Tenglong Ao, Baoquan Chen, Libin Liu, SIGGRAPH 2024 Conference Papers. 2024

Skills

- **Data Visualization:** creation and visualization of simulated human body models using Panda3d
- **Deep Reinforcement Learning:** Proximal Policy Optimization (PPO) of rigid body humanoid & model based learning control for rigid body humanoid deep generation of motion sequences
- **Agent design:** Design agent for software engineering
- **Large Model:** Diffusion model of kinematic character motions, Distillation of Diffusion model
- **Coding Language:** Pascal, C/C++, Python, PyTorch, C Sharp
- **Algorithm & Data Structure:** Dymanic Programming, Graph Theory, Computational geometry, Data Structure Design
- **Software:** Unity, Unreal Engine, Blender, basic Adobe and Microsoft series
- **Soft Skills:** Presentation, Planning, Paper Writing, Creative Problem-Solving, Machinery Operation, Teamwork, Adaptability

Research Experience

- Physics Based Character Animation (Aug. 2022 - Jun. 2024) - Peking University, under the supervision of Baoquan Chen and Libin Liu.
- Code generation and software engineering via large language models (Aug. 2024) - Deepseek

Teaching Experience

- TA in Computer Generated Imagery, 2024 Spring, PKU course
- TA in Practice of programming in C & C++, 2024 Spring, PKU course
- TA in Data Structure and Algorithms(Honor Track), 2023 Fall, PKU course
- TA in Practice of programming in C & C++, 2023 Spring, PKU course

Social Activities

- Problem setter for NOI 2022,2023 & APIO 2023 & CSP-S 2022 & NOIP 2022.
- Co-organizer for NOI 2022 & APIO 2023 & China IOI Team Training Camp 2020, 2021

Awards

- Gold medal **(1st place)**, 36th National Olympiad in Informatics Jul 2019
- Gold medal **(3rd place)**, 32nd International Olympiad in Informatics Sep 2020
- Gold medal **(2rd place)**, 45th Annual ICPC World Finals Nov 2022
- Outstanding graduate of Peking University, Jul 2024
- First Prize in School for Freshman: PKU, 2020
- First Prize in School: PKU, 2020-2021
- Merit Student: PKU, 2020-2021
- National Scholarship: PKU, 2021-2022
- Merit Student: PKU, 2021-2022

Languages

- **English** [Fluent]
- **Chinese** [Native]