

RUI DU

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Education

Huazhong University of Science and Technology WuChang Branch

2009 – 2013

B.Sc. Computer Science

GPA: 1.9/4.0 Score: 68/100

Technical skills: Ruby, Python, Cpp(no expert).

Research Experience

Multi-Agents and Game Theory Rui Du

Sep 2024 – present

↪ Prof. Peter Zhang

CMU

- I am learning from Prof. Peter how to transform my work into a paper, focusing on the integration of multi-agents and game theory.

RLHF base on LLama2 32xA800 Zhipeng Teng, Rui Du, Mengran Yu

Jul 2023 – Dec 2023

- We developed reward and PPO models for RLHF based on the Llama2 large language model. 32XA800.

NMMO Multi-Agents Competitions Rui Du, Shuai Liu, Shangliang Qian, Yueyue Hu

April 2022 – Oct 2022

Reinforcement Learning Distributed Framework Rui Du, Shuai Liu, Shangliang Qian, Yueyue Hu

2020 – 2023

- We developed a distributed RL framework that quickly adapts to diverse tasks and fits our company's cluster.

Google Football Multi-Agents Rui Du, Shuai Liu, Shangliang Qian, Yueyue Hu

June 2020 – April 2021

- To increase the complexity of reinforcement learning tasks, I chose to study a multi-agent system.

Research on the RL algorithms within the Dota2 environment.

Sijia Xu, Bin Hu, Rui Du April 2019 – Aug 2021

- I have focused on studying RL algorithms A2C, DQN, and PPO in the Dota 2 environment, utilizing distributed computing across 192 NVIDIA GTX 1080 Ti GPUs and 1000 CPUs, along with setting up the gaming infrastructure.

Work Experience

Bilibili Inc, Department of AI Senior Algorithm Engineer

Sep 2016 – present

Shanghai Fuxisi Technology Co. Ltd (Startups) Full Stack Engineer

Jun 2014 – Sep 2016

Augmentum, Inc. Full Stack Engineer

Jun 2013 – Jun 2014

Publications

Y. Chen, J. Suarez, J. Zhang, C. Yu, B. Wu, H. Chen, H. Zhu, **Rui Du**, S. Qian, S. Liu, W. Hong, J. He, Y. Zhang, L. Zhao, C. Zhu, J. Togelius, S. Mohanty, J. Chen, X. Li, X. Zhu, and P. Isola. Benchmarking robustness and generalization in multi-agent systems: A case study on neural mmo, 2023.

E. Liu, J. Suarez, C. You, B. Wu, B. Chen, J. Hu, J. Chen, X. Zhu, C. Zhu, J. Togelius, S. Mohanty, W. Hong, **Rui Du**, Y. Zhang, Q. Wang, X. Li, Z. Yuan, X. Li, Y. Huang, K. Zhang, H. Yang, S. Tang, and P. Isola. The neurips 2022 neural mmo challenge: A massively multiagent competition with specialization and trade, 2023.

Awards

NeurIPS 2022 the Neural MMO Challenge Final Result - Top2 2022

IJCAI 2022 the Neural MMO Challenge Final

Result - Top1 2022

IEEE CoG 2023 Google Football 5v5 AI Chal-

lenge Final Result - Top3 2023

IEEE CoG 2022 Google Football 5v5 AI Chal-

lenge Final Result - Top2 2022

Technical Projects

Reinforcement Learning Agents in Unity with MLAgents (2021 – 2022)

- Deployed reinforcement learning agents in a gaming environment using Unity and MLAgents library, enhancing AI-driven game dynamics.

Real-time Data Monitoring and Management with Golang and Ruby (2016 – 2018)

- Integrated real-time data streams using Kafka with Golang and Ruby, implemented online monitoring, experimental platforms, and data governance systems.

Hadoop-based Offline ETL and Data Analysis (2016 – 2018)

- Utilized Hadoop for executing offline ETL tasks, video ranking, and data analysis within the company.

Smart Home Automation via Ruby IFTTT System (2015 – 2016)

- Engineered a smart home IFTTT system using Ruby, featuring mobile app APIs for home automation control.

Ruby-based Online Shopping System (2014 – 2015)

- Developed a comprehensive e-commerce system with Ruby, including modules for order processing, payment handling, product display, and backend management.

Internal Management System Development (2013 – 2014)

- Designed and implemented an in-house ticket management system to streamline operations and support workflows.