

DAVID (RUO YU) TAO

✉ ruoyutao@brown.edu

in taodav

🐙 taodav

🌐 taodav.cc

☎ +1 401 471 9185

INVITED TALKS

Novelty Search in Representational Space for Sample Efficient Exploration

Oral Presentation, NeurIPS 2020

Towards Solving Text-based Games by Producing Adaptive Action Spaces
Oral Presentation, WordPlay workshop
NeurIPS 2018

Learning from Text-Based Games, Machine Intelligence Conference, MIT, 2018

SKILLS

Programming Languages

Python

Java

Javascript

OCaml

C++

Ruby

SQL

Frameworks & Technology

JAX

PyTorch

Numpy

Tensorflow

OpenAI Gym

Pandas

Amazon Web Services

Google Cloud Computing

MySQL

MongoDB

Flask

Node & Express

D3.js

Git

AWARDS MISC.

Commissioned Combat Engineer Officer, 2015

Commissioned officer in the Singapore Armed Forces.

EDUCATION

Brown University – Providence, RI - *Sep 2022 - Current*

Advisor: George Konidakis

- Current Ph.D. student in Computer Science.

University of Alberta – Edmonton, AB - *Sep 2020 - Sep 2022*

Advisors: Adam White, Marlos C. Machado

- M.Sc. (Thesis) in Computer Science (4.0/4.0 GPA).

McGill University – Montreal, QC - *Sep 2016 - Dec 2019*

Advisor: Joelle Pineau

- B.Sc. Honours Computer Science (Dean's Honour List, First Class Honours, 3.96/4.0 GPA).

CONFERENCE PUBLICATIONS

Novelty Search in Representational Space for Sample Efficient Exploration

Ruo Yu Tao, Vincent François-Lavet, Joelle Pineau

Published for oral presentation at NeurIPS 2020.

WORKSHOP PUBLICATIONS

Towards Solving Text-Based Games by Producing Adaptive Action Spaces

Ruo Yu Tao, Marc-Alexandre Côté, Xingdi Yuan, Layla El Asri

Published for oral presentation at the WordPlay 2018 workshop, NeurIPS 2018.

Textworld: A Learning Environment for Text-Based Games

MA Côté, A Kádár, X Yuan, B Kybartas, T Barnes, E Fine, J Moore, RY Tao, M Hausknecht, LE Asri, M Adada, W Tay, A Trischler

Presented at the Computer Games Workshop at IJCAI 2018, Stockholm.

PREPRINTS

Agent-State Construction with Auxiliary Inputs

Ruo Yu Tao, Adam White, Marlos C. Machado

Currently in review.

EMPLOYMENT

National University of Singapore – Research Assistant | Singapore - *May 2020 - Aug 2020*

Advisor: Lee Wee Sun

- Conducted research on neural latent mapping for Reinforcement Learning (RL) and SLAM.

Mila (Quebec Artificial Intelligence Institute) – Student Intern | Montreal, QC -

Jan 2019 - April 2020

Advisor: Joelle Pineau

- Conducting research on model-based exploration in a Reinforcement Learning context.
- First author of a NeurIPS 2020 conference paper, accepted for oral presentation.

Microsoft Research – Research Intern | Montreal, QC - *May 2018 - Dec 2018*

Advisor: Marc-Alexandre Côté

- Research in language generation and text-based RL. First-authored a workshop paper at NeurIPS 2018 as an undergraduate. Contributed to the TextWorld (<https://aka.ms/textworld>) framework.

PROJECTS

Know Your VC (acquired) – Co-Founder, CTO

- Built and maintained the entire application that hosted 15,000 monthly active users.

ACTIVITIES

McGill Artificial Intelligence Society – Co President, Co-founder - *Jun 2017 - May 2019*