Tianxin Tao

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Education

University of British Columbia Vancouver, Canada
B. Applied Science in Mechanical Engineering, minor in Computer Science *Sep. 2014 – May 2019*
- Average: 89.6%

University of British Columbia Vancouver, Canada
Master in Computer Science *Sep. 2019 – Present*
- Supervisor: Prof. Michiel van de Panne
- Average: 95.8%

Publication

Towards the Development of a Learning-Based Intention Detection Framework for Pushrim-Activated Power-Assisted Wheelchairs
Mahsa Khalili, Tianxin Tao, Ruolan Ye, Shuyong Xie, Huancheng Yang, H.F. Machiel Van der Loos, Jaimie Borisoff
2019 IEEE-RAS-EMBS International Conference on Rehabilitation Robotics (ICORR)

Learning to Locomote: Understanding How Environment Design Matters for Deep Reinforcement Learning
Daniele Reda*, Tianxin Tao*, Michiel van de Panne
(*: Equal Contribution)
ACM SIGGRAPH Motion, Interaction and Games (MIG 2020)

Experience

AI Engineer Intern May 2021 – Present
2012 Lab (Central Media Institute), Huawei Technologies Co., Ltd. *Shenzhen, China*
- Implemented rule-based motion stylization algorithm based on heuristics
- Re-implemented offline motion stylization algorithms published in SIGGRAPH
- Developed novel neural network architecture for online motion stylization based on LSTM

Research Assistant Sep 2019 – Present
IMAGER Lab, University of British Columbia *Vancouver, BC, Canada*
- Studied the impact of various parameters in simulation for off-policy reinforcement learning
- Experimented with learning latent representation from multi-view imaginary by contrastive learning to better serve locomotion tasks in reinforcement learning
- Explored different choices of action space in reinforcement learning for locomotion tasks

Teaching Assistant May 2019 – Dec 2020
University of British Columbia *Vancouver, BC, Canada*
- Course instructed: CPSC 121(Models of Computation), CPSC 314(Computer Graphics), CPSC 425(Computer Vision)
- Prepared coding assignments for the courses
- Led labs and tutorial sections to help students better understand the course material

Technical Assistant May 2018 – Aug 2018
Department of Forest Resources Management, University of British Columbia *Vancouver, BC, Canada*
- Designed the user interface of the website to support the researchers
- Implemented the front-end interface in ReactJS
- Designed the structure of the database, and implemented user sign up, log in functions using Firebase

Volunteer

Student Volunteer Jan 2020
ICML 2020 *Online*

- Organized and invigilated poster discussion on Zoom

Research Volunteer May 2017 - August 2017
Industrial and Automation Laboratory, University of British Columbia *Vancouver, BC, Canada*

- Implemented boustrophedon decomposition path planning algorithm
- Built Gazebo simulation to examine the performance of proposed path planning algorithm
- Programmed micro-controller to control the motor speed of a robotic boat

Awards & Scholarships

Graduate Teaching Assistant Award May 2021
Computer Science, University of British Columbia

- Presented to graduate teaching assistants who have distinguished themselves by earning outstanding scores and feedback from students on teaching evaluations.

Faculty of Applied Science International Student Scholarship December 2018
University of British Columbia

- Offered to continuing international students in the Faculty of Applied Science who demonstrate strong academic achievement, engagement in the Faculty, and the potential to make a scholarly contribution within their chosen field of study

Elizabeth and Leslie GOULD Scholarship in Engineering November 2018
University of British Columbia

- Three scholarships offered to engineering students in the Faculty of Applied Science which are made on the recommendation of the Faculty

Undergraduate Student Academic Achievement Award October 2017, November 2018
Mechanical Engineering, University of British Columbia

The Trek Excellence Scholarship September 2015, September 2018
University of British Columbia

- Offered to students in the top 5% of their undergraduate year

Skills

Programming Languages: Python, JavaScript, MATLAB, C/C++, SQL, HTML/CSS
Developer Tools: Jupyter Notebooks, Git, VS Code, Amazon Azure
Languages: Chinese, English