Mingde "Harry" Zhao

BASICS

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Languages: English (native), 汉语(母语), français (un peu), Esperanto (iom)

MY DREAM

Make humanity better through the meaningful studies of artificial intelligence!

RESEARCH INTERESTS

***Essence of Learning**: Reinforcement learning, Meta-Learning*

***Theory**: Geometry, Optimization, Theories of Machine Learning, Linear Algebra, Estimation Theory*

***Techniques**: Numerical Optimization, Evolutionary strategies*

EDUCATION BACKGROUND

Mila (L'institut québécois d'intelligence artificielle) / McGill University — Sep. 2018 - Now

Major: Computer Science, Master of Science

CGPA: 4.0 / 4.0

Supervisors: Prof. Doina Precup (Mila, DeepMind, McGill) & Prof. Xiao-Wen Chang (McGill)

Dalian University of Technology — Sep. 2014 - Jun. 2018

Major: Computer Science and Technology, Honored Bachelor of Engineering

GPA: **CS-related Course 92.1%, 90.8% Overall**

PAPERS (CONFERENCE)

"*META-Learning State-based Eligibility Traces for More Sample-Efficient Policy Evaluation*"

– **Mingde Zhao***, Sitao Luan*, Ian Porada*, Xiao-Wen Chang, Doina Precup @ AAMAS 2020. *: *Equal contribution.*

"*Break the Ceiling: Stronger Multi-scale Deep Graph Convolutional Networks*"

– Sitao Luan*, **Mingde Zhao***, Xiao-Wen Chang, Doina Precup @ NeurIPS 2019. *: *Equal contribution.*

"*Exploring Overall Contextual Information for Image Captioning in Human-Like Cognitive Style*"

- Hongwei Ge, Zehang Yan, Kai Zhang, **Mingde Zhao,** Liang Sun @ ICCV 2019.

"*Strategy Selection in Complex Game Environments Based on Transfer Reinforcement Learning*"

– Hongwei Ge, **Mingde Zhao**, Kai Zhang, Liang Sun @ IJCNN 2019.

"*Multi-Grained Cascade AdaBoost Extreme Learning Machine for Feature Representation*"

– Hongwei Ge, Weiting Sun, **Mingde Zhao**, Kai Zhang, Liang Sun and Chao Yu @ IJCNN 2019.

"*A Selective Ensemble Learning Framework for ECG-Based Heartbeat Classification with Imbalanced Data*"

- Hongwei Ge, Keyi Sun, Liang Sun, **Mingde Zhao**, and Chunguo Wu @ BIBM 2018.

"*A Many Objective Evolutionary Algorithm with Fast Clustering and Reference Point Redistribution*"

- **Mingde Zhao**, Hongwei Ge, Hongyan Han, Liang Sun @ CEC 2018.

PAPERS (JOURNAL)

"*A Reference Vector based Many-Objective Evolutionary Algorithm with Feasibility-Aware Adaptation*"

– **Mingde Zhao**, Hongwei Ge, Kai Zhang, Yaqing Hou @ Applied Soft Computing, 2019.

"*Stacked Denoising Extreme Learning Machine Autoencoder based on Graph Embedding for Feature Representation*"

- Hongwei Ge, Weiting Sun, **Mingde Zhao** @ IEEE Access, 2019.

"*An Interactive Many Objective Evolutionary Algorithm with Cascade Clustering and Reference Point Incremental Learning*"

- Hongwei Ge*, **Mingde Zhao***, Liang Sun, Zhen Wang, Guozhen Tan, Qiang Zhang, C. L. Philip Chen.

@ IEEE Transactions on Evolutionary Computation, 2018. *: *Equal contribution.*

PAPERS (PRE-PRINTS) & SOFTWARE TOOLS

"*Generalizable Meta-Heuristic based on Temporal Estimation of Rewards for Large Scale Blackbox Optimization*"

- **Mingde Zhao***, Hongwei Ge*, Yi Lian, Kai Zhang @ Arxiv. *: *Equal contribution*

"*SOOPLAT: A Convenient Experimental Platform for Single Objective Optimization*"

- Mingde Zhao @ Github, 2018.

PATENTS

"*Fast Dichotomic CNN for Hierarchical Traffic Sign Identification*"

- Hongwei Ge, **Mingde Zhao**, Xin Yang @ SIPO (National Patent Office of China), accepted in Oct. 2018

"*Peach Flesh Segmentation with Deep Reinforcement Learning*"

- Hongwei Ge, **Mingde Zhao**, Jiaojiao Lin, Liang Sun @ SIPO, accepted in Jun. 2018.

BEYOND STUDYING & RESEACH

McGill University, Teaching Assistant (Numerical Computing, COMP 350) Sep. 2019 – Dec. 2019

CIFAR Deep Learning & Reinforcement Learning Summer School Jul. 2019 - Aug. 2019

Neusoft Dalian, *Research Engineer* Jan. 2017 - Feb. 2017, Jul. 2016 - Aug. 2016

HONORS

Master's Honors:

DeepMind Graduate Award (2019).

Graduate Mobility Awards (2019).

Undergraduate Honors:

Scholarships for Academic Excellence for each undergraduate school year (2015, 2016, 2017, 2018).

Honored bachelor (2018).

Outstanding bachelor thesis (2018).

Outstanding student researcher of the year (2018).