JIXIANG YU

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EDUCATION

Dongbei University of Finance and Economics (DUFE) *09/2018 - 07/2022*
Bachelor of Science
Overall GPA: 90.5/100 (major ranking: 1/27)
Core Modules: C Programming (99); Python Programming (98); Java Programming (99); Algorithm Analysis and Design (98); Python Data Science and Engineering (99); Operating System (98); Construction and Maintenance of Website (98); Data Mining Overview(98)

The Hong Kong University of Science and Technology(Guangzhou Campus) *09/2022 - 07/2026(expected)*
Doctor of Philosophy
Supervisor: Prof. Hongyuan Liu & Prof. Jiang Xu
Research Interest: MLSys; Computer Architecture; Industrial Big Data; Neural Network Design and Applications.
Guangzhou Campus is an extension of HKUST Clear Water Bay Campus, focusing on interdisciplinary research, rather than an independent University.

AWARDS & HONORS

Student Member of China Computer Federation (CCF)
Outstanding Graduate of Dalian (3%). Mar., 2022
Best Report in 5th ICDLT. Jun., 2021
Advanced Individual in Subject Competition of DUFE (2%). May., 2021
Second Prize in the Contemporary Undergraduate Mathematical Contest in Modeling(CUMCM) (5%). Nov., 2020
First Prize in the CUMCM(Liaoning Division). Nov., 2020
First-class Comprehensive Scholarship of DUFE for the second semester of 2020-2021 Academic Year
Second-class Comprehensive Scholarship of DUFE for the first semester of 2020-2021 Academic Year
First-class Comprehensive Scholarship of DUFE for the second semester of 2019-2020 Academic Year

RESEARCH PROJECTS & EXPERIENCES

Research on Big Data Service Process Optimization and Dynamic Resource Allocation in Hybrid Cloud Environment, National Natural Science Foundation of China (71772033). Supervisor: Prof. Ming Gao.

05/2020 - Present

· Research objective: to solve the problem of low resource consumption on cloud better from a higher perspective.
· Improved the Transformer, a representative architecture in deep learning, customized its position encoding and designed an attention mask to describe and characterize the graph structured data.
· Designed a fusion module to integrate GNN and Transformer into an end-to-end architecture.
· Tools and technologies applied: Python, Deep Learning, Pytorch, Pytorch-geometric, Linux, and etc.

Theory and Method of Real-Time Distribution Service Operation Management under O2O Mode, key project of National Natural Science Foundation of China (71831003) (Sub project, with Prof. Gao.)

05/2021 - Present

· Mainly responsible for space-time graph neural network and Transformer based time series prediction.
· On this basis, the neural network architecture of deep reinforcement learning system could be designed, and the realtime scheduling algorithm in random scene would be studied based on SUMO simulation system.
· Tools and technologies applied: Python, SUMO, Pytorch, Pygame, and etc.

Research on Blood Mass Spectrometry for Disease Diagnosis. (Key member of cooperation between Prof. Gao and Prof.Qian of Shanghai Jiaotong University.)

06/2021 - Present

· Research objective: to make full use of blood spectrometry for disease diagnosis.

· Mainly responsible for novel deep learning algorithm design, feature interpretability research, and manuscript(methodology part) writing.
· Tools and technologies applied: Python, Deep Learning, Pytorch, Keras, Captum, and etc.

PUBLICATIONS

[**J1**]*Workflow Performance Prediction based on Graph Structure Aware Deep Attention Neural Network.* (**First Author**, Journal of Industrial Information Integration, Feb., 2022), Impact Factor: *10.063*

[**C1**]*A Transformer Based Sales Prediction of Smart Container in New Retail Era.* (**Co-First Author**, 2021 5th International Conference on Deep Learning Technologies (ICDLT), Jul., 2021)

[**C2**]*Workload Prediction of Cloud Workflow based on Graph Neural Network.* (**Co-First Author**, The 18th International Conference on Web Information Systems and Applications (WISA2021), Sep., 2021)

[**J2 (Under Review)**]*Workload Prediction of Cloud Workflow based on Fusion Architecture of GNN and Transformer.* (**First Author**, Submitted to IEEE Transactions on Neural Network and Learning Systems)

ACADEMIC CONFERENCES

· **(Oral presentation)** 2021 5th International Conference on Deep Learning Technology
· YEF (Youth Elite Forum) 2021
· 2021 BAAI Conference (online)
· 2020 BAAI Conference (online)
· **(Oral presentation)** The 18th International Conference on Web Information Systems and Applications (WISA2021)

SKILLS & SERVICES

Computer Languages	C, Python, Java, JavaScript, LaTeX
OS	Windows, Ubuntu, macOS
English	IELTS(6.5), CET-6(548)
Reviewer	IEEE Access

Last Update: Mar., 2022. Built by LaTeX.