

Jiayu Song

+86 152 7489 9885 - ✉ jiayusong@csu.edu.cn - G [Jiayu Song](#) - in [jiayusong1999](#) - M [Mario0716](#)

EDUCATION

Central South University

Bachelor of Science in Data Science and Big Data Technology - GPA: 88.43/100

Hunan, China

Sept. 2017 - Jun. 2021

Central South University

Master of Science in Computer Science, advised by [Prof. Shichao Zhang](#)

Hunan, China

Sept. 2021 - Jun. 2024

RESEARCH EXPERIENCE

The University of Sydney

Remote visitor advised by [Prof. Chang Xu](#)

Remote

Nov. 2022 - May. 2023

- Research Topics: Video Moment Retrieval, Multimodal Learning

Xiaoxiang Institute of Big Data

Big Data Intern

Hunan, China

May. 2020 - July. 2020

- Research Topics: Epidemic Data Visualization, Representation Learning

Central South University

Research Assistant of [Prof. Shichao Zhang](#) and [Prof. Chengyuan Zhang](#)

Hunan, China

Jun. 2019 - May. 2020

- Research Topics: Cross-Modal Retrieval, Multimodal Learning

PUBLICATIONS

(* denotes supervisor or equal contribution)

- (ACM TOMM'20) Chengyuan Zhang*, [Jiayu Song](#), Xiaofeng Zhu, Lei Zhu, Shichao Zhang, HCMSL: Hybrid cross-modal similarity learning for cross-modal retrieval, ACM Transactions on Multimedia Computing, Communications, and Applications (TOMM), 2021, 17(1s): 1-22 [PDF](#)
- (ICME 2021) Lei Zhu, Chengyuan Zhang, [Jiayu Song](#), Liangchen Liu, Shichao Zhang, Yangding Li, Multi-graph based hierarchical semantic fusion for cross-modal representation, 2021 IEEE International Conference on Multimedia and Expo (ICME), 2021: 1-6 (One of Top Papers) [PDF](#)
- (ICMR 2022) Lei Zhu, Liewu Cai, [Jiayu Song](#), Xinghui Zhu, Chengyuan Zhang, Shichao Zhang, MSSPQ: Multiple Semantic Structure-Preserving Quantization for Cross-Modal Retrieval, Proceedings of the 2022 International Conference on Multimedia Retrieval. 2022: 631-638 [PDF](#)
- (NPL'22) Lei Zhu, [Jiayu Song](#), Zhan Yang, Wenti Huang, Chengyuan Zhang, Weiren Yu, DAPCMH: Deep Adversarial Privacy-Preserving Cross-Modal Hashing, Neural Processing Letters, 2022, 54(4): 2549-2569 [PDF](#)
- (IEEE Multimedia'20) Lei Zhu, [Jiayu Song](#), Xiaofeng Zhu, Chengyuan Zhang, Shichao Zhang, Xinpan Yuan, Adversarial learning-based semantic correlation representation for cross-modal retrieval, IEEE MultiMedia, 2020, 27(4): 79-90 [PDF](#)
- (MTAP'20) Lei Zhu, [Jiayu Song](#), Xiangxiang Wei, Hao Yu, Jun Long, CAESAR: concept augmentation based semantic representation for cross-modal retrieval, Multimedia Tools and Applications, 2020: 1-31 [PDF](#)

PROJECTS

Online Top-K query based on road network spatio-temporal keywords

Youth Foundation of National Natural Science Foundation: No. 61702560

Participant

Jan. 2018 - Dec. 2020

Methods about Big Data Understanding and Knowledge Discovery

Key Project of National Natural Science Foundation: No. 61836016

Participant

Jan. 2019 - Dec. 2022

Multimodal Semantic Understanding and Heterogeneous Quantitative Query in Agriculture

National Natural Science Foundation: No. 62202163

Participant

Jan. 2023 - Present

Robot Coding-the Intelligent Automatic Programming based on AI and Big Data

Undergraduate Innovation and Entrepreneurship

Core Technician

Sept. 2019 - Jun. 2020

SELECTED AWARDS AND SCHOLARSHIPS

- **Outstanding Undergraduate Graduation Thesis (Top 2%)** in Central South University Jun. 2021
- **National Encouragement Scholarship (Top 2%)** Support by Ministry of Education of P.R.China Sept. 2018
- **First Scholarship for Graduate Students (Top 5%)** Support by Central South University Sept. 2021
- **The Second Prize Scholarship (Top 10%)** Support by Central South University Sept. 2018
- **Outstanding Annual Conference Paper (Top 0.5%)** at Chuangxiang China - CSU Station Jun. 2019

RESEARCH INTERESTS

Multimodal Learning, Reinforcement Learning, Large Language Models, and Robotics

TECHNICAL SKILLS

Programming Languages: Python, C/C++ , Java, LaTeX, MATLAB, Linux

Libraries and Tools: PyTorch, Tensorflow, Numpy, OpenCV

ML Architectures: Mamba, CNN, LSTM, ResNet, Diffusion Model, Transformer