

DAI, XINYAN

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EDUCATION

The Chinese University of Hong Kong

August 2018 - Present

Doctor of Philosophy

Computer Science and Engineering

NanJing University

Sept 2014 - June 2018

Bachelor of Engineering, Software Institute.

15%

PROJECTS

MPI-Tensorflow

The project aims to implement MPI as tensorflow operation for distributed machine learning.

Similarity Search

This project is a general framework for index based similarity search.

Quantization

A framework for vector quantization.

TECHNICAL STRENGTHS

Programming

C++, Java, Python, MPI, Hadoop, Tensorflow, Pytorch,

Research Interests

LSH and Quantization for Similarity Search, Large Scale Machine learning.

PUBLICATIONS

Norm-Range Partition: A Universal Catalyst for LSH based MIPS [pdf] [github]

Xiao Yan, **Xinyan Dai**, Jie Liu, Kaiwen Zhou, James Cheng [CoRR], 2018

Norm-Ranging LSH for Maximum Inner Product Search [pdf] [github]

Xiao Yan, Jinfeng Li, **Xinyan Dai**, Hongzhi Chen, and James Cheng [NeurIPS], 2018

WORKING PAPER

Hyper-Sphere Quantization: Communication-Efficient SGD for Federated Learning

Xinyan Dai, Xiao Yan, Kaiwen Zhou, Kelvin K. W. Ng, James Cheng, Zhe Zhang

submitted to [ICML], 2019

Norm-Explicit Quantization: Improving Vector Quantization for Maximum Inner Product Search [github]

Xinyan Dai, Xiao Yan, Kelvin K. W. Ng, James Cheng

submitted to [SIGKDD], 2019