JUN-GI JANG

CONTACT

Data Mining Laboratory
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EDUCATION

M.S/Ph.D Student — MAR. 2017 - PRESENT
Computer Science and Engineering
Seoul National University
Advisor: U Kang

Bachelor of Science — MAR. 2010 - FEB. 2017
Mechanical and Aerospace Engineering,
Computer Science and Engineering (double major)
Seoul National University

RESEARCH INTERESTS

Tensor Analysis, Time Series Data Analysis

PUBLICATIONS

Conferences

C1. **Jun-Gi Jang**, Donjin Choi, Jinhong Jung, and U Kang, "Zoom-SVD: Fast and Memory Efficient Method for Extracting Key Patterns in an Arbitrary Time Range", ACM International Conference on Information and Knowledge Management (CIKM), 2018, Lingotto, Turin, Italy. [Paper link]

C2. **Jun-Gi Jang** and U Kang, "D-Tucker: Fast and Memory-Efficient Tucker Decomposition for Dense Tensors", 36th IEEE International Conference on Data Engineering (ICDE), 2020, Online. [Paper link]

C3. Moonjeong Park*, **Jun-Gi Jang***, and Lee Sael, "VEST: Very Sparse Tucker Factorization of Large-Scale Tensors", IEEE International Conference on Big Data and Smart Computing (BigComp), 2021, Online. (* equal contribution) [Paper link]

- Best Paper Award − 1st Place

C4. Yong-chan Park, **Jun-Gi Jang**, and U Kang, "Fast and Accurate Partial Fourier Transform for Time Series Data", The 27th ACM SIGKDD International Conference on Knowledge Discovery and Data Mining (KDD), 2021, Online. (to appear)

C5. **Jun-Gi Jang** and U Kang, "Fast and Memory-Efficient Tucker Decomposition for Answering Diverse Time Range Queries", The 27th ACM SIGKDD International Conference on Knowledge Discovery and Data Mining (KDD), 2021, Online. (to appear)

Journals

J1. Sejoon Oh, Namyong Park, **Jun-Gi Jang**, Lee Sael, and U Kang, "High-Performance Tucker Factorization on Heterogeneous Platforms", IEEE Transactions on Parallel and Distributed Systems, Apr. 1, 2019. [Paper link]

J2. Dongjin Choi, **Jun-Gi Jang**, and U Kang, "S3CMTF: Fast, accurate, and scalable method for incomplete coupled matrix-tensor factorization", PLOS ONE, June 28, 2019. [Paper link]

PATENTS

Patents

P1. **Jun-Gi Jang**, Dongjin Choi, and U Kang, Apparatus and Method For Processing Data (registered on Jan. 2020).
P2. Donjing Choi, **Jun-Gi Jang**, and U Kang, Data Analysis Method and Apparatus for Sparse Data (registered on Mar. 2020).
P3. **Jun-Gi Jang** and U Kang, Method for Decomposing Tensor and Apparatus for Performing the Same (filed on Sep. 2020).
P4. Dawon Ahn, **Jun-Gi Jang** and U Kang, Method for Tensor Decomposition with Temporal Dependency and Apparatus Therefor (filed on Mar. 2021).
P5. Yongchan Park, **Jun-Gi Jang** and U Kang, Fast Partial Fourier Transform Method and Computing Apparatus for Performing the Same (filed on Apr. 2021).

AWARDS & HONORS

Humantech Paper Award (Honorable Mention, lead-author), Samsung — FEB. 2018

Lecture/Research Scholarship, Seoul National University — MAR. 2019 - PRESENT

WORK EXPERIENCE

Research Intern, HYPERCONNECT — JUL. 2020 - AUG. 2020

TALKS

Talks

1. Zoom-SVD: Fast and Memory Efficient Method for Extracting Key Patterns in an Arbitrary Time Range, NC Soft, Jan. 2019

TEACHING EXPERIENCE

Lead T.A., M2177.004900 Theory and Lab of IoT, AI, and Big Data @ SNU	SPRING 2020
T.A., M2177.004900 Theory and Lab of IoT, AI, and Big Data @ SNU	FALL 2019
T.A., M2177.004900 Theory and Lab of IoT, AI, and Big Data @ SNU	SPRING 2019
T.A., M1522.001400 Introduction to Data Mining @ SNU	SPRING 2018
T.A., M1522.000900 Data Structure @ SNU	FALL 2017

GRADUATE COURSEWORK

M2177.003000 Advanced Data Mining @ SNU	FALL 2019
4190.676 Artificial Neural Networks @ SNU	FALL 2019
3394.506 Advanced Numerical Linear Algebra @ SNU	SPRING 2019
M1522.002500 Quantum Computing and Information Fundamentals @ SNU	SPRING 2019
430.502 Industrial Applications of Electrical and Electronic Technologies @ SNU	FALL 2018
430.709A Convex Optimization @ SNU	FALL 2018
4190.771 Topics in Algorithms (ML algorithms in bioinformatics) @ SNU	FALL 2018
430.707A Pattern Recognition @ SNU	SPRING 2018
4190.771 Topics in Algorithms (Compression) @ SNU	SPRING 2018
M1522.001600 Topics in Big data Analytics @ SNU	FALL 2017
M1522.000500 Information Visualization and Visual Analytics @ SNU	FALL 2017
430.707A Advance Databases @ SNU	SPRING 2017
M1522.001600 Topics in Big data Analytics @ SNU	SPRING 2017

REFERENCES