

Sejoon Oh

Computational Biology Department
Carnegie Mellon University
5000 Forbes Ave GHC 7412, Pittsburgh, PA 15213
Email: ohhenrie@cmu.edu

RESEARCH INTERESTS	Data Mining, Machine Learning, Parallel and High-Performance Computing, Computational Biology	
EDUCATION	Carnegie Mellon University , Pittsburgh, PA	
	▪ Ph.D. in Computational Biology	Aug. 2018 – Present
	Seoul National University , Seoul, Korea	
	▪ Bachelor of Science (B.S.) in Computer Science and Engineering • Overall GPA: 3.68 / 4.0, Major GPA: 3.67 / 4.0	Mar. 2012 – Aug. 2018
PUBLICATIONS	JOURNAL PAPERS	
	[J4] Kijung Shin, Sejoon Oh , Jisu Kim, Bryan Hooi, and Christos Faloutsos, “Fast, Accurate and Provable Triangle Counting in Fully Dynamic Graph Streams”, ACM Transactions on Knowledge Discovery from Data (TKDD) , 2019 (Under Revision).	
	[J3] 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 (TPDS) , 2019 (Accepted).	
	[J2] Namyong Park, Sejoon Oh , and U Kang, “Fast and Scalable Method for Distributed Boolean Tensor Factorization”, VLDB Journal , 2019.	
	[J1] Sejoon Oh* , Jungwoo Lee*, and Lee Sael, “GIFT: Guided and Interpretable Factorization for Tensors with an Application to Large-Scale Multi-platform Cancer Analysis”, Bioinformatics , 2018 (* these authors contributed equally to this work).	
	CONFERENCE PAPERS	
	[C1] Sejoon Oh , Namyong Park, Lee Sael, and U Kang, “Scalable Tucker Factorization for Sparse Tensors - Algorithms and Discoveries”, <i>IEEE International Conference on Data Engineering (ICDE 2018)</i> , Paris, France, Apr. 2018. • Gold Prize Winner from Samsung Humantech Award and Best Paper Award from SNU.	
	[C2] Namyong Park, Sejoon Oh and U Kang, “Fast and Scalable Distributed Boolean Tensor Factorization” , <i>IEEE International Conference on Data Engineering (ICDE 2017)</i> , San Diego, California, USA, Apr. 2017.	
RESEARCH EXPERIENCE	Undergraduate Research Intern , Seoul National University	
	▪ Data Mining Lab. (Advised by Prof. U Kang)	July 2016 – May 2018
	▪ Research area: tensor analysis, recommender system, and high-performance computing	
RESEARCH PROJECTS	▪ Developing Big Data Engine Based on High-Performance Computing	Jan. 2017 – May 2018
	• Core developer of sparse matrix and tensor operations	
	• Funded by Korea Ministry of Science and ICT	
	▪ Anomaly Detection Techniques on I/O Trace Time Series	Mar. 2017 – June 2017
	• Core developer of the project, cooperated with SK Telecom company	
	▪ Accelerator Programming Winter School	Feb. 2017
	• Implementing convolutional neural network (CNN) on heterogeneous platforms	
	▪ Deep Writing Algorithm Using Word-Level LSTM	Sept. 2016 – Dec. 2016
	• Term project for a class “Introduction to Machine Learning”	
	▪ Personalized Recommender System via Coupled Matrix Factorizations	Aug. 2016 – Dec. 2016
	• Core developer of the project, cooperated with Hyundai card company	
	▪ SNUMAP: Finding Shortest Paths via a Path-Combination Algorithm	Mar. 2014 – June 2014
	• Term project for a class “Database”	
AWARDS & SCHOLARSHIPS	▪ Best Thesis Award (among all CSE undergraduate students)	Aug. 2018

	Awarded by Seoul National University, Korea	
	▪ Humantech Paper Award (Gold Prize, 1st in Computer Science)	Feb. 2018
	Awarded by Samsung, Korea	
	▪ National Scholarship for Science and Engineering	Dec. 2017
	Awarded by Ministry of Science and ICT, Korea	
	▪ Final Top-10 Winner	Feb. 2017
	Awarded at Accelerator Programming Winter School (APWS), Korea	
	▪ The 5th Place Winner	Aug. 2016
	Awarded at Samsung Collegiate Programming Cup (SCPC), Korea	
	▪ Merit-based Scholarship	Aug. 2012
	Awarded by Seoul National University, Korea	
	▪ Superior Academic Performance Scholarship	Mar. 2012
	Awarded by Seoul National University, Korea	
	▪ Silver Medalist of Asia-Pacific Informatics Olympiad	May 2011
	Awarded at the 5th Asia-Pacific Informatics Olympiad (APIO), Iran	
	▪ Gold and Silver Medalist	July 2008 – July 2011
	Awarded at Korea Olympiad in Informatics (KOI), Korea	
	▪ Candidate for International Olympiad in Informatics (IOI)	Aug. 2008 – Aug. 2010
	Trained at IOI Summer and Winter School, Korea	
PROFESSIONAL SERVICES	<u>Journal Reviewer</u>	
	▪ European Conference on Machine Learning and Principles and Practice of Knowledge Discovery in Databases (ECML-PKDD 2018; Guest Reviewer)	2018
PATENTS	<u>KOREA</u>	
	Sejoon Oh , Namyong Park, U Kang, “Apparatus for Supporting Multi-dimensional Data Analysis through Parallel Processing and Method for the Same”, Korean patent number: 10-2017-0158951 (filed on Nov. 2017).	
WORK EXPERIENCE	Korean Augmentation To the United States Army (KATUSA) , Seoul, Korea	
	▪ Interpreter & Administrative Assistant	Oct. 2014 – July 2016
	• Mandatory military service, served as a sergeant	
	• Received Army Commendation Medal by the U.S. Army brigade commander, acknowledging outstanding leadership	
RELEVANT COURSEWORK	▪ Graduate Artificial Intelligence (CMU - 15780)	Spring 2019
	▪ Graduate Machine Learning (CMU - 10701)	Fall 2018
	▪ Artificial Intelligence	Spring 2018
	▪ Introduction to Linear Algebra	Fall 2017
	▪ Advanced Topics in Algorithms (Graduate Coursework)	Spring 2017
	▪ Introduction to Data Mining	Spring 2017
	▪ Engineering Research Practice 1	Spring 2017
	▪ Introduction to Machine Learning	Fall 2016
	▪ Database	Spring 2014
	▪ Software Applications	Spring 2014
TECHNICAL SKILLS	▪ C, Python, and OpenCL (Advanced)	
	▪ Java, C++, and MATLAB (Experienced)	
	▪ Scala, R, and CUDA (Intermediate)	
LANGUAGES	▪ Korean: ILR Level 5 – Native proficiency	
	▪ English: ILR Level 4 – Full professional proficiency	
	• TOEFL score: 108 (Reading: 28, Listening 29, Speaking 24, Writing 27)	Aug. 2017