Haekyu Park

HOMEPAGE https://haekyu.com   **EMAIL** haekyu@gatech.edu

Education		
	Ph.D., Computer Science	Aug 2018 - Present
	Georgia Institute of Technology, Atlanta, GA	
	Advisor: Dr. Polo Chau	
	B.S., Computer Science and Engineering	Mar 2012 - Aug 2017
	Seoul National University, Seoul, Republic of Korea	
	Graduated with honors (Cum Laude)	

Research Experience		
	Graduate Research Assistant	Aug 2018 - Present
	Georgia Institute of Technology, Atlanta, GA	
	Data Science Intern	May 2019 - Aug 2019
	NVIDIA, Austin, TX	
	Mentor: Bartley Richardson, Brad Rees, Joe Eaton	
	The work was integrated into NVIDIA tutorial session at KDD 2019.	
	Undergraduate Research Assistant	June 2016 - Aug 2017
	Seoul National University, Seoul, Republic of Korea	

Honors		
	Amazon AWS Research Grant	2018
	Co-PIs: Nilaksh Das, Scott Freitas, Duen Horng Chau	
	Funded $5,000 in AWS cloud credits	
	National Scholarship For Science and Engineering	2015
	Merit-based	

Publications

Summit: Scaling Deep Learning Interpretability by Visualizing Activation and Attribution Summarizations
Fred Hohman, Haekyu Park, Caleb Robinson, Duen Horng Chau
IEEE VIS (VAST), 2019.

MLsploit: A Cloud-Based Framework for Adversarial Machine Learning Research
Nilaksh Das, Siwei Li, Chanil Jeon, Jinho Jung, Shang-Tse Chen, Carter Yagemann,
Evan Downing, Haekyu Park, Evan Yang, Li Chen, Michael Kounavis, Ravi Sahita,
David Durham, Scott Buck, Duen Horng Chau, Taesoo Kim, Wenke Lee
Workshop Presentation, Black Hat Asia - Arsenal, 2019.

NeuralDivergence: Exploring and Understanding Neural Networks by Comparing Activation Distributions
Haekyu Park, Fred Hohman, Duen Horng Chau
Poster, PacificVis, 2019.

SIDE: Representation Learning in Signed Directed Networks
Junghwan Kim, Haekyu Park, Ji-Eun Lee, and U Kang
The Web Conference, 2018.

A Comparative Study of Matrix Factorization and Random Walk with Restart in Recommender Systems
Haekyu Park, Jinhong Jung, and U Kang
IEEE Big Data, 2017.

Talks	**NeuralDivergence: Exploring and Understanding Neural Networks by Comparing Activation Distributions** Apr 2019, Poster Presentation, PacificVis **A Comparative Study of Matrix Factorization and Random Walk with Restart in Recommender Systems** Dec 2017, Oral Presentation, IEEE Big Data
Teaching	**Graduate Teaching Assistant** Georgia Institute of Technology, Atlanta, GA Data and Visual Analytics (CSE 6242), Instructor: Polo Chau

Projects

Explore the history of space and interplanetary travel through a visualization of space data 2018
Keywords: Information Visualization, Scrollytelling, d3.js
`https://psy901.github.io/space-mission-project/`

Recommender System for Videos on Oksusu Application 2017
Keywords: Deep Learning, Sequence/Word Embedding, Approx. k-NN, Heterogeneous Features
SK Telecom, Seoul, Republic of Korea

A Fast Data Compression with Shared Virtual Memory in Heterogeneous System Architecture 2017
Keywords: OpenCL, GPGPU, SVM, HSA
Undergraduate thesis

Personalized Recommendation for Credit Card Rewards 2016
Keywords: Coupled Matrix Factorization, Time Series Data
Hyundai Card, Seoul, Republic of Korea

Skills

Programming Languages
Python, JavaScript, HTML, R, Matlab, Java, C, C++, Ocaml, Scheme

Machine Learning / Deep Learning / Data Science
TensorFlow, Keras, scikit-learn, OpenCV, Numpy, Pandas, SciPy, NetworkX

GPU-accelerated Data Science
cuGraph, cuDF, cuML, BlazingSQL, OpenCL

Data Visualization
D3.js, HoloViews, Matplotlib, WebGL, ggplot

Professional Service

Reviewer
KDD 2019