Myungha Jang

Research Scientist

Education

2013 - 2019	**Ph.D. in Computer Science**, *University of Massachusetts Amherst*, MA, U.S., Center for Intelligent Information Retrieval .
	Ph.D. Thesis: Probabilistic Models for Identifying and Explaining Controversy
2011-2012	**M.S. in Computer Science**, *POSTECH*, Pohang, South Korea.
2006-2011	**B.S. in Computer Science**, *Ewha Womans University*, Seoul, South Korea.
	Study abroad at Wesleyan College, U.S. in 2009
	Graduated with Magna Cum Laude

Experience

Feb. 2019 -   **Research Scientist**, *Facebook*, Menlo Park, CA.

Summer 2017   **Machine Learning Software Engineer Intern**, *Facebook*, Menlo Park, CA.
- Machine Learning Intern in Whole Page Ranking Team
- Conducted various search A/B testings and analysis and worked on developing search results ranker

Summer 2015   **Research Intern**, *IBM T.J. Watson Research Center*, Yorktown heights, NY.
- Host: Dr. Kenneth W. Church
- Worked on improving Watson's Automatic Q&A Retrieval System by analyzing the quality and the characteristics of the training dataset

2013- Present   **Research Assistant**, *Center for Inteligent Information Retrieval*, UMass Amherst.
- Working on understanding controversy from search results
- Worked on improving technical document clustering by automatically identifying non-textual components such as table, code, formulas
- Advised by Prof. James Allan

2011-2012   **Research Assistant**, *Information and Database Systems Lab*, POSTECH.
- Worked on mining comparable entities from query log graph
- Advised by Prof. Seung-won Hwang

2011   **Student Researcher**, *Undergraduate Research Program*, Korea Foundation for the Advancement of Science and Creativity.
- Wrote a research proposal, which won $10,000 research grant
- Research title: Development of Signaling Pathway Computer-Aided Design (CAD) System
- Advised by Prof. Hyun-Seok Park

2008-2010   **Research Intern**, *Bioinformatics Lab.*, Ewha Womans University.
- Developed a software tool that visualizes a large scale metabolic pathway
- Performed pathway network analysis and developed a pathway abstraction algorithm, and published a few papers at conferences as the lead author
- Advised by Prof. Hyun-Seok Park

☎ *+1-413-992-3413* • ✉ *myungha@fb.com* • ⌂ *www.myungha.me*

Publications

Conferences

- Youngwoo Kim, **Myungha Jang** and James Allan, Explaining Text Matching on Neural Natural Language Inference, ACM Transactions on Information Systems (ToIS) 2021

- **Myungha Jang** and James Allan, Explaining Controversy on the Social Media via Stance Summarization, The 41st International ACM SIGIR Conference on Research and Development in Information Retrieval (SIGIR 2018)

- Masaharu Yoshioka, **Myungha Jang**, James Allan and Noriko Kando, Visualizing Polarity-based Stances of News Websites, The Second International Workshop on Recent Trends in News Information Retrieval at ECIR (NewsIR 2018)

- **Myungha Jang**, Shiri Dori-Hacohen and James Allan, Modeling Controversy Within Populations, The 3rd ACM International Conference on the Theory of Information Retrieval (ICTIR 2017)

- **Myungha Jang**, Jinho Choi, James Allan, Improving Document Clustering by Removing Unnatural Language, The 3rd Workshop on Noisy User-generated Text at EMNLP (W-NUT 2017)

- **Myungha Jang**, John Foley, Shiri Dori-Hacohen, and James Allan, Probabilistic Approaches to Controversy Detection, The 25th ACM International Conference on Information and Knowledge Management (CIKM 2016)

- **Myungha Jang**, James Allan, Improving Automated Controversy Detection on the Web, The Proceedings of the 39th International ACM SIGIR Conference on Research and Development in Information Retrieval (SIGIR 2016) pp. 865-868

- Jongwuk Lee, **Myungha Jang**, Dongwon Lee, Won-Seok Hwang, Jiwon Hong, Sang-Wook Kim, Alleviating the Sparsity in Collaborative Filtering using Crowdsourcing, *The Int'l Workshop on Crowdsourcing and Human Computation for Recommender Systems (CrowdRec)*, 2013.

- **Myungha Jang**, Jin-woo Park, Seung-won Hwang, Predictive Mining of Comparable Entities from the Web, *The 26th Association for the Advancement of Artificial Intelligence (AAAI)*, pp. 66-72, 2012.

- **Myungha Jang**, Arang Rhie, Hyun-Seok Park, Toward Automatically Drawn Metabolic Pathway Atlas with Peripheral Node Abstraction Algorithm, *The 4th IEEE International Conference on Bioinformatics & Biomedicine (BIBM)*, pp. 638-642, 2010.

- Arang Rhie, **Myungha Jang**, Hyun-Seok Park, Trace of Evolutionary Evidence by Analyzing Clustering Information of Metabolic Pathways in Eukaryotes, *The 4th IEEE International Conference on Bioinformatics & Biomedicine (BIBM)*, pp. 862-863, 2010.

- **Myungha Jang**, Arang Rhie, Jiyoung Whang, Sanduk Yang, Hyun-Seok Park, A Statistical Analysis of Relation Degree of Compound Pair on Online Biological Pathway Databases, *The 3rd ACM International Conference on Ubiquiotous Information Management and Communication (ICUIMC)*, pp. 644-649, 2009.

Journals

- Kyungeun Lee, **Myungha Jang**, Arang Rhie, Sanduk Yang, Chin Ting Thong, Hyun-Seok Park, Java DOM Parsers to Convert KGML into SBML and BioPAX Common Exchange Formats, *Genomics & Informatics*, Vol. 8, No. 2, 2010.

- **Myungha Jang**, Jiyoung Whang, Coleen S. Lewis, Hyun-Seok Park, An Interpretation of Biological Metabolites and their Reactions Based on Relation Degree of Compound Pairs in KEGG XML Files, *Journal Of Software*, Vol. 5, No. 2, pp. 187-194, 2010.

- Sung-Hui Kang, **Myungha Jang**, Jiyoung Whang, Hyun-Seok Park, Parsing KEGG XML Files to Find Shared and Duplicate Compounds Contained in Metabolic Pathway Maps: A Graph-Theoretic

Perspective, *Genomics & Informatics*, Vol. 6, No. 3, pp. 147-152, 2008.

Book

○ Hyun-Seok Park, Sanduk Yang, **Myungha Jang**, Mikyung Cho, Sung-il Ham, Bioinformatics in Java Workbook, Published by Ji&Sun, ISBN 978-89-5550-191-9.

Awards

2016	KSEA-KOCSEA Graduate Scholarship
2016	Best Poster Award at UKC 2016
2016	SIGIR Student Travel Grant
2015	NCWIT Symantec Student Seed Funding (for UMass CS Women)
2014	Grace Hopper Celebration Scholarship
2012	AAAI Student Travel Award
2010	Silver Prize, Senior Project Competition, Ewha Womans University
2009	2010 Undergraduate Research Program Fellowship ($10,000), Korea Foundation for the Advancement of Science and Creativity
2009	Study Aborad Fellowship ($12,000), KB Kookmin Bank
	○ Spent one academic year at Wesleyan College, GA, United States in 2009

Activities

CS Women Group Co-chair at UMass Amherst   2014–2015

I served to organize programs and services for female students in the CS department at UMass.

Ewhaian (*www.ewhaian.com*) Administrator   2006–2008

Ewhaian is the biggest online community for students of Ewha Womans University with approximately 60,000 users. I managed the web server and the web design, helped to organize four large fund-raising parties of 5,000 people, and designed on/offline posters for numerous events.

Technical Skills

Programming: Java, Python, C/C++, AWK/Bash, SQL, CSS/HTML, JQuery
OS: Windows, UNIX, MAC OS
Tools: Adobe Illustrator and Photoshop