

# Seongmin Mun

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## RESEARCH INTERESTS

**Main Area** Computational Linguistics; Natural Language Processing; Data Visualization; Statistics; Korean

**Current Focus** Polysemy interpretation in language recognition; Distributional semantic model; Probabilistic approaches to NLP; Recurrent neural network for language models

## EDUCATION

### Université Paris Ouest Nanterre

Ph.D. candidate in Sciences du Langage  
Expected graduation: February 2021

### Ajou University

M.A. in media contents, February 2016

### Pyeongtaek University

B.A. in statistics, February 2014

## SKILLS & CERTIFICATIONS

### Industrial Knowledge:

Machine Learning; Deep Learning; Neural Network; Web-based System

### Computer Language:

JAVA; JavaScript; Python; R; SQL; HTML/CSS; PHP

### Statistics Software:

Python (Jupyter Notebook); R (RStudio); SAS; SPSS; MATLAB

### Certificate of Achievement:

Oracle Certified JAVA Programmer (issued by Oracle; October 2014)

SAS Certified Base Programmer (issued by SAP Korea; August 2013)

Survey Analyst (SPSS, SAS), Junior (issued by Human Resources Development Service of Korea; May 2013)

## PAPERS AND PROCEEDINGS

- Mun, S.** (invited; under review). Towards a better annotation system for Korean adverbial postpositions: Challenges for development research. *Special issue in Korean Linguistics*.
- Ha, H., Han, H., **Mun, S.**, Bae, S., Lee, J., & Lee, K. (2019). An Improved Study of Multilevel Semantic Network Visualization for Analyzing Sentiment Word of Movie Review Data. *Applied Sciences*, 9, 2419. doi:10.3390/app9122419
- Ha, H., **Mun, S.**, Choi, G., Hong, E., Lee, S., & Lee, K. (2019). Visual Analysis on the Political Orientation of Historical Characters in the Joseon Dynasty: Focusing on Seo, Geojeong. *Archives of Design Research*, 32(1), 147-161.
- Mun, S.**, Choi, G., Desagulier, G., & Lee, K. (2018). PreechVis: Visual Profiling using Multiple-word Combinations. *Proceedings of the 13th International Joint Conference on Computer Vision, Imaging and Computer Graphics Theory and Applications (IVAPP2018)*, 97-107.
- Lee, K., Lee, J., Kim, D., Park, J., **Mun, S.**, Jang, Y., & Park, J. (2017). Controversy Visualization- How Controversial Public Discourse in Wikipedia Articles Evolves over Time. *Archives of Design Research*, 30(4), 57-69.
- Mun, S.**, Choi, G., Lee, S., & Lee, K. (2017). Visual analysis for voting relationships in Joseon Dynasty, Korea. *Proceedings of the 10th International Conference on ICT, Society and Human Beings*, 111-118.
- Mun, S.**, Desagulier, G., & Lee, K. (2017). A visual approach for text analysis using multiword topics. *IEEE, EuroVis 2017, 19th EG/VGTC Conference on Visualization*, 57-59.
- Mun, S.**, & Lee, K. (2016). Data analysis by Integrating statistics and visualization: Visual verification for the prediction model. *Journal of Society of Design Convergence*, 15(6), 195-214.
- Park, S., Jo, E., **Mun, S.**, & Lee, K. (2016). Analysis of corporate twitter usage types and Influence Visualization on Key Players. *Journal of Society of Design Convergence*, 15(6), 129-144.

- Mun, S.**, Kim, G., Choi, G., & Lee, K. (2016). Visual Trend Analysis Method for Ontology based Opinion Mining on Movie Review. *Proceedings of the 13th International Conference on Web Based Communities and Social Media 2016*, 287-290.
- Ha, H., Han, H., **Mun, S.**, Bae, S., Lee, J., & Lee, K. (2016). Visualization of movie recommendation system using the sentimental vocabulary distribution map. *The Korea Society of Computer and Information*, 21(5), 19-29.
- Mun, S.**, Kim, G., Choi, G., & Lee, K. (2016). Movie Recommended System based on Analysis for the User Review utilizing Ontology Visualization. *Journal of Society of Design Convergence*, 15(2), 347-368.
- Park, S., Jo, E., Lee, H., **Mun, S.**, & Lee, K. (2015). Analysis of Corporate Twitter Usage Types and Influence Visualization on Key Players. *Proceedings of the IADIS International Conference Web Based Communities*, 122-131.
- Ha, H., **Mun, S.**, Kwon, O., & Lee, K. (2015). Proximity Based Circular Visualization for Similarity Analysis of UNGA Voting Patterns. *Proceedings of the IEEE International Symposium on Big Data Visual Analytics (BDVA 2015)*, 127-128.
- Choi, H. Ha, H., **Mun, S.**, & Lee, K. (2015). Proximity based Circular Visualization for similarity analysis of voting patterns between nations in UN General Assembly. *Journal of Society of Design Convergence*, 14(4), 133-150.
- Mun, S.**, Ha, H., & Lee, K. (2015). Relationship Analysis between the Box Office Performance and Sentimental Words in Movie Review. *Journal of Society of Design Convergence*, 14(4), 1-16.
- Mun, S.**, Han, H., Ha, H., & Lee, K. (2014). A Visual Analysis on Factors Affecting Repurchase Intention in Social Commerce. *Journal of Society of Design Convergence*, 13(6), 139-152.

- PRESENTATIONS** **Mun, S., & Shin, G-H.** (September 2021). *Context window size and polysemy: A case of adverbial particle -(u)lo in Korean*. The international conference of quantitative linguistics in Asia (QUALICO).
- Mun, S., & Shin, G-H.** (August 2021). *How does context window size address polysemy of adverbial postposition -(u)lo in Korean?*. The 11th International Conference on Construction Grammar (ICCG11).
- Shin, G-H., & Mun, S.** (August 2021). *Bayesian simulation of Korean-speaking children's constructional knowledge about transitive events*. The 11th International Conference on Construction Grammar (ICCG11).
- Mun, S., & Shin, G-H.** (June 2020). *Context window and polysemy interpretation: A case of Korean adverbial postposition -(u)lo*. IMPRS Conference 2020: Interdisciplinary Approaches to the Language Sciences, Max Planck Institute for Psycholinguistics.
- Shin, G-H., & Mun, S.** (June 2020). *Bayesian modelling of clause-level constructional knowledge for Korean-speaking preschool children*. IMPRS Conference 2020: Interdisciplinary Approaches to the Language Sciences, Max Planck Institute for Psycholinguistics.
- Mun, S.** (November 2019). *A computational approach to resolve the polysemy of postpositions in Korean*. COLDOC 2019, Colloque de doctorants et de jeunes chercheurs en Sciences du langage.
- Mun, S., Wang, I., Desagulier, G., Choi, G., & Lee, K.** (December 2018). *Fruit flies like a banana: Parsing multiword constructions with DepVis*. Digits, internal reflection, and the study of linguistics., Hankuk University of Foreign Studies.
- Choi, G., Yoon, T., Park, C., Lee, S., Choi, H., Park, C., Kang, J., Mun, S., & Lee, K.** (December 2018). *A Visual Analysis of Power Relations among People on Time-series Data Using Network Visualization: Focusing on 19th National Assembly Data in Korea*. 43rd Annual Meeting of the Social Science History Association.

- Guo, W., Kim, S., **Mun, S.**, & Lee, K. (October 2018). *BubbleUp: Toward Better Analysis for Temporal Event Data*. IEEE VIS 2018, Scientific Visualization, Information Visualization and Visual Analytics.
- Mun, S.**, Wang, I., Desagulier, G., Choi, G., & Lee, K. (July 2018). *Time flies like an arrow and fruit flies like a banana; parsing multiword constructions with DepVis*. The 10th International Conference on Construction Grammar (ICCG10), Paris Sorbonne University.
- Desagulier, G., Lacheret-Dujour, A., Isel, F., & **Mun, S.** (May 2018). *Characterizing discourse genres with prosodic features in a reference treebank of spoken French*. Aflicojet2018, Corpora and Representativeness.
- Mun, S.**, Desagulier, G., & Lee, K. (October 2017). *How can we capture multiword expressions?*. 5th International Conference on Statistical Language and Speech Processing (SLSP2017).
- Bae, S., **Mun, S.**, Choi, G., Lim, S., Bang, S., Son, S., Hong, C., Shin, H., & Lee, K. (June 2017). *Visualization based sankey diagram for decision making tree analysis*. ACM, Computer Graphics International 2017 (CGI2017).
- Mun, S.**, Desagulier, G., Lacheret-Dujour, A., & Lee, K. (June 2017). *How can we capture multiword expressions?*. The day of Ph.D. students in MODYCO.
- Mun, S.**, Han, H., Choi, G., Yoon, T., Kim, J., & Lee, K. (November 2016). *Hierarchical Network Visualization Approach to Power Mechanism in Medieval Joseon Korea*. 41st Annual Meeting of the Social Science History Association.
- Bae, S., **Mun, S.**, Choi, G., Lim, S., Bang, S., Son, S., Hong, C., Shin, H., & Lee, K. (October 2016). *Decision tree analysis utilizing sankey diagram*. Academic Association of Global Cultural Contents (AAGCC).
- Choi, S., Kim, J., Kim, S., **Mun, S.**, Kim, K., & Lee, K. (August 2016). *Analysis of Linguistic Difference in Writing Primed with Regulatory Focus*. The Sixth International Conference on Language, Literature, Culture and Education (ICLLCE) 2016.

**Mun, S.**, Choi, G., Han, H., Kim, J., & Lee, K. (June 2016). *VoteStreamVis: Visual Analysis of Congressional Votes in the Annals of the Joseon Dynasty*. Interdisciplinary Research Methodology for 'Big Data' in Historical Studies; The beginning of 'Digital History'.

**Mun, S.**, Kim, G., Karim, R. M., & Lee, K. (October 2015). *Internet Review Opinion Mining and Data Visualization*. Symposium on Visualization in Data Science (VDS at IEEE VIS 2015).

Lee, S., Choi, H., **Mun, S.**, Han, H., Ha, H., & Lee, K. (December 2014). *Visualization Approach to a Korean Genealogy Data*. 2014 The 1st International Symposium on Digital Humanities, Digital Humanities and Culture: Trends and Prospects.

## **GRANTS, AWARDS, & SCHOLARSHIPS**

### **Major**

*Research Scholar Grant* (KRW 15,000,000; app. EUR 12,000) | Ajou University; September 2017 ~ January 2018

*Research Scholar Grant* (KRW 15,000,000; app. EUR 12,000) | Ajou University; February 2017 ~ August 2017

*Research Scholar Grant* (KRW 15,000,000; app. EUR 12,000) | Ajou University; September 2016 ~ January 2017

*Research Assistance Scholarship* (KRW 24,500,000; app. EUR 19,600) | Department of History, Ajou University; November 2014 ~ November 2018

*Research Grant* (KRW 10,800,000; app. EUR 8,640) | National Research Foundation of Korea, Brain Korea 21, September 2014 ~ February 2016

### **Others**

*Research Assistance Scholarship* (EUR 5,000) | Department of Linguistics, Université Paris 8; February 2019 ~ August 2019

*Research Assistance Scholarship* (EUR 2,500) | Department of Linguistics, Université Sorbonne Nouvelle Paris 3; November 2018 ~ February 2019

*Best Paper Award* | Journal of Design Research; 2018 KSDS Fall International Conference; November 2018

*Research Assistance Scholarship* (KRW 1,000,000; app. EUR 800) | Ajou University; August 2018

*Research Grant* (KRW 2,000,000; app. EUR 1,600) | National Research Foundation of Korea, Brain Korea 21; July 2018 ~ August 2018

*Research Assistance Scholarship* (KRW 3,000,000; app. EUR 2,400) | Department of History, Ajou University; June 2018 ~ September 2018

*Research Award from the Minister of Education* | The Education Ministry of Korea; National Research Foundation of Korea; March 2018

*Ph.D. Research Scholarship* (KRW 7,000,000; app. EUR 5,600) | National Research Foundation of Korea, Brain Korea 21, February 2018 ~ August 2018

*Research Assistance Scholarship* (KRW 1,500,000; app. EUR 1,200) | Department of History, Seongbuk-gu government public relations division; November 2017 ~ March 2018

*Full Scholarship for Registration* (KRW 5,000,000; app. EUR 4,000) | Ajou University; September 2017

*Full Scholarship for Registration* (KRW 5,000,000; app. EUR 4,000) | Ajou University; February 2017

*Kantar Information is Beautiful Awards* | Kantar; November 2016

*Ajou Undergraduate Research Award* (KRW 1,000,000; app. EUR 800) | Ajou University; December 2016

*Full Scholarship for Registration* (KRW 5,000,000; app. EUR 4,000) | Ajou University; September 2016

*Research Assistance Scholarship* (KRW 1,800,000; app. EUR 1,440) | Leaders in INdustry-university Cooperation (LINC); March 2016 ~ August 2016

*Ph.D. Research Scholarship* (KRW 7,000,000; app. EUR 5,600) | National Research Foundation of Korea, Brain Korea 21, February 2016 ~ August 2016

*80% Scholarship for Registration* (KRW 4,000,000; app. EUR 3,200) | National Research Foundation of Korea, Brain Korea 21; February 2016



*Research Assistance Scholarship* (KRW 1,000,000; app. EUR 800) | Sungshin Women's University; December 2015

*Half Scholarship for Registration* (KRW 2,500,000; app. EUR 2,000) | National Research Foundation of Korea, Brain Korea 21; September 2015

*Research Assistance Scholarship* (KRW 4,000,000; app. EUR 3,200) | Korea Meteorological Administration; March 2015 ~ December 2015

*Half Scholarship for Registration* (KRW 2,500,000; app. EUR 2,000) | National Research Foundation of Korea, Brain Korea 21; February 2015

*Full Scholarship for Registration* (KRW 5,000,000; app. EUR 4,000) | Ajou University; September 2014

*Special Admission Scholarship* (KRW 5,000,000; app. EUR 4,000) | Ajou University; February 2014

*Half Scholarship for Registration* (KRW 2,000,000; app. EUR 1,600) | Pyeongtaek University; September 2013

*Full Scholarship for Registration* (KRW 4,000,000; app. EUR 3,200) | Pyeongtaek University; February 2013

*Full Scholarship for Registration* (KRW 4,000,000; app. EUR 3,200) | Pyeongtaek University; September 2012

## **TEACHING EXPERIENCE**

*Undergraduate course instructor*

Examine history through statistics with R | Korea University, October 2018 ~ November 2018

*Programming course instructor*

Recipes: Data handling and analysis with R | Ajou University, July 2018 ~ August 2018

*International course instructor*

Recipes: Text mining with R | Ajou University, May 2018 ~ June 2018

*Teaching (programming) assistance*

Text Mining on Historical Data | Ajou University, March 2018 ~ June 2018



*Teaching (programming) assistance*

Text Mining on Historical Data | Ajou University, March 2016 ~ June 2016

*Teaching (programming) assistance*

Text Mining on Historical Data | Ajou University, September 2015 - December 2015

*Teaching (programming) assistance*

Visual Information Graphics | Ajou University, March 2015 ~ June 2015

*Teaching (programming) assistance*

Visual Analysis on Historical Data | Ajou University, March 2015 ~ June 2015

## **PERSONAL EXPERIENCE**

*Research Assistant* (Université Paris 8 & Université Sorbonne Nouvelle Paris 3; November 2018 ~ August 2019)

Data mining/analysis, system development, research paper writing as a co-author.

*Research Assistant* (Ajou University; December 2017 ~ August 2018)

Data mining/analysis, system development, research paper writing as a co-author.

*Research Assistant* (Ajou University, Leaders in INdustry-university Cooperation (LINC); March 2016 ~ August 2016)

Data mining/analysis, system development, research paper writing as a co-author.

*Research Assistant* (Sungshin Women's University; December 2015)

Statistical analysis.

*Research Assistant* (Korea Meteorological Administration; March 2015 ~ December 2015)

Data mining/analysis, system development, research paper writing as a co-author.

*Research Assistant* (Ajou University, Department of History; November 2014 ~ November 2018)

Data mining/analysis, system development, research paper writing as a co-author.

*Research Assistant* (Ajou University, Brain Korea 21; September 2014 ~ August 2018)

Data mining/analysis, system development, research paper writing as a co-author.

*Statistical investigation agent* (Gyeongin Regional Statistics Office; July 2013 ~ August 2013)

Telephone survey, Verification of survey data.