JIWOO SEO

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EDUCATION

Ph.D. in Information   **Jun. 2025 – Present**
Florida State University (FSU)   Tallahassee, United States

MBA in Management Information Systems   **Mar. 2023 – Aug. 2025**
Chung-Ang University (CAU)   Seoul, Korea
- Top of the Class (Spring & Fall 2023)

M.Eng. in Computing (Concentration: Web Science and Technology)   **Mar. 2014 – Feb. 2016**
Korea Advanced Institute of Science and Technology (KAIST)   Daejeon, Korea
- Short Thesis: "Verification and Improvement of Ontology Model for Cultural Heritage Management"
- Exchange Student Program: University of Technology of Troyes (UTT), France   *01/2015-06/2015*

B.A. in Library & Information Science (minor: Computer Engineering)   **Mar. 2008 – Aug. 2013**
Ewha Womans[sic] University   Seoul, Korea
- Dean's List (Spring & Fall 2011)
- Exchange Student Program: Nanyang Technological University (NTU), Singapore *07/2012-12/2012*

RESEARCH INTERESTS

Ontology, Natural Language Processing (NLP), Digital Humanities, AI Literacy, Human-AI Collaboration

RESEARCH EXPERIENCE

Researcher   **Apr. 2024 – Oct. 2024**
The Korea University & College Library Association (Affiliated with CAU Central Library)   *Remote*
Project: "Research on University Library Digital Literacy Curriculum Development"
- Developed standard Digital/AI literacy curricula, including "How to utilize Generative AI", "Introduction to Data Analysis Using Python", and "How to Write a thesis in Science and Engineering".
- Co-authored a research report and a Korean journal paper with team members.

Graduate Student Researcher   **Dec. 2014 – Feb. 2016**
Culture Technology Institute, KAIST (advisor: Jungwha Kim)   *Daejeon, Korea*
Project: "K-Culture Time Machine"
- Revised and validated an ontology-based Korean Culture Heritage Data Model (KCHDM) to manage cultural heritage databases.
- Integrated and enhanced metadata of the Cultural Heritage Administration, Encyclopedia of Korean Culture, and the National Museum of Korea's 'E-museum' into the KCHDM.
- Applied KCHDM to an AR-based mobile app describing historical locations through temporal and spatial contexts; registered KCHDM as a standard with the Telecommunications Technology Association (*TTAK.KO-10.0850*).
- Authored a master's short thesis detailing KCHDM model development.

Graduate Student Researcher   **Mar. 2014 – Dec. 2014**
Semantic Web Research Center, KAIST (advisor: Key-Sun Choi)   *Daejeon, Korea*
Project 1: "Exobrain – Korean NLP2RDF"

- Built an ontology-based Korean NLP2RDF framework to convert Wikipedia info-box data into Resource Description Framework (RDF) triple format.
- Combined morphological analysis, phrase syntax information, Named Entity Recognition (NER), and dependency structures to the framework, aligned with the international standard NLP Interchange Format (NIF).
- Resolved functional issues in the Korean NLP2RDF framework, specifically addressing the need for word segments due to the unique morphological characteristics of the Korean language.
- Published conference papers; registered a patent in Korea and the U.S. under the PCT.

Project 2: "LOD (Linked Open Data) 2 – Korean DBpedia"
- Researched "Question & Answering (QA)" and "Knowledge-based" systems such as ontology mapping to integrate DBpedia with FrameNet, considering DBpedia's hierarchical structures and FrameNet's semantic frame structures.
- Managed the LOD2 Korean DBpedia project, publishing conference papers and establishing a standard format to convert unstructured text into structured RDF triples.

TEACHING EXPERIENCE

Graduate Teaching Assistant   **Aug. 2025 – Present**
School of Information, Florida State University   *Tallahassee, United States*
- Graded course assessments for LIS2780: Database Concepts (Spring 2026)
  LIS4910: IT Project, LIS4369: Extensible Enterprise Solution (Fall 2025)

Librarian, Special Lecture Instructor   **Jun. 2021 – Apr. 2025**
Central Library, Chung-Ang University   *Seoul, Korea*
"How to Use Generative AI Chatbot"   *04/2024-04/2025*
- Teach AI history, NLP basics, AI language model features, AI Ethics, and Generative AI platforms, including ChatGPT, Bing Copilot, Gemini, and Clova X.

"How to Write a Thesis in Science and Engineering"   *03/2022-04/2025*
- Teach thesis *vs.* journal papers, research ethics, and academic paper writing process from ideation to conclusion.

"Academic Database Utilization"   *06/2021-04/2025*
- Teach scholarly paper search and database utilization skills, including Web of Science and Scopus.

PUBLICATIONS

JOURNALS
Jung, J.H., Lee, J.W. & **Seo, J.-W.** (2025). A Research on the Development of a Digital Literacy Curriculum for University Libraries. *Journal of Korean Library and Information Science Society, 56(2),* 275-295. https://doi.org/10.16981/kliss.56.2.202506.275
Seo, J. (2023). Education and Cases of Generative AI Utilization Chung-Ang University, *Journal of Korean Medical Library Association, 50 (1_2),* 65-73. https://doi.org/10.69528/jkmla.2023.50.1_2.65

BOOK CHAPTERS
Seo, J. (2024). A Librarian's Case Study of Generative AI in Libraries, *Yearbook of University Library Association*. The Korea University & College Library Association.
Seo, J. (2023). Chung-Ang University Generative AI Use Education and Cases, *Yearbook of University Library Association*. The Korea University & College Library Association.

CONFERENCES

Seo, J. (2026). Beyond Automation: Why Human Experts Volunteer in Biomedical Ontology Communities in the Generative AI Era, *ASIS&T Information Science Summit & Special Libraries Conference, USA.* (Poster)

Hahm, Y.G., **Seo, J.**, Hwang, D., & Choi, K.-S. (2014). DBpedia Ontology Population Coverage Enhancement with FrameNet, *Proceedings of the 26th Annual Conference on Human and Cognitive Language Technology (HCLT), Korea,* 32-37. (**Best Paper**)

Seo, J., Hahm, Y.G. & Choi, K.-S. (2014). Semantic-Frame Granularity Refinement for QA system, *The 41st Korean Computer Congress Winter Conference*, *Korea*, 459-461. (Poster)

Seo, J., Won, Y., Kim, J., Hahm, Y.G., & Choi, K.-S. (2014). NIF Application for Korean Natural Language Processing, *Proceedings of the 26th Annual Conference on HCLT, Korea,* 167-172. (Poster)

Won, Y., **Seo, J.**, Kim, J., & Hahm, Y.G., & Choi, K.-S. (2014). Korean NLP2RDF Framework, *Proceedings of the 26th Annual Conference on HCLT*, *Korea*, 215-220. (Poster)

Hahm, Y., Kim, Y., Won, Y., Woo, J., **Seo, J.**, Park, S., Hwang, D., & Choi, K.-S. (2014). Toward Matching the Relation Instantiation from DBpedia Ontology to Wikipedia Text: Fusing FrameNet to Korean, *SEM 2014: Proceedings of the 10th International Conference on Semantic Systems*, *Germany*, 13-19. https://doi.org/10.1145/2660517.2660534

PRESENTATIONS

"Information Literacy for GenAI academic search", *Generative AI and Academic Search Workshop (GAI&AS), ACM SIGIR Conference on Human Information Interaction and Retrieval*, USA, Mar. 2026.

"Education and Cases of Academic Information Use at Chung-Ang University", *Seminar on Using RISS and University Licenses*, Korea, Mar. 2024.

"Education and Cases of Generative AI Use at Chung-Ang University", *University Library Practitioner Seminar*, Korea, Nov. 2023, and *Korean Medical Library Association Fall Academic Conference*, Oct. 2023.

"Cases of Generative AI Application at Chung-Ang University", *Practitioner Workshop for Private University Library Association*, Korea, Jul. 2023.

PATENTS

Seo, J., & Chae, J. (2022). *Speech Recognition of Named Entities with Word Embeddings to Display Relationship Information* (Patent No. US 11,232,785 B2). LG Electronics. https://patents.google.com/patent/US11232785B2

Chae, J., & **Seo, J.** (2021). *Artificial Intelligence Device Generating Named Entity Table and Method for Same* (Patent No. WO 2021/040105 A1 US 2021/0334461 A1). LG Electronics. https://patents.google.com/patent/WO2021040105A1/en

Choi, K.S., Hahm, Y.G., & **Seo, J.W.** (2016). *Knowledge Representation Expansion Method and Apparatus* (Patent No. WO 2016/117920 A1, US 2018/0144049 A1, KR 10-1685053 B1). KAIST. https://patents.google.com/patent/WO2016117920A1/en

HONORS & AWARDS

School of Information General Development Fund Scholarship, FSU	Fall 2025, Spring 2026
Research Project Award, Korean Council for University Education	Jan. 2025
Academic Excellence Scholarship, Chung-Ang University	Fall 2023, Fall 2024
Outstanding Progress Award, LG Electronics S/W Training Program	Dec. 2017
Best Paper Award, The 26th Annual Conference on HCLT	Nov. 2014
Korean Government Scholarship (fully funded), KAIST	Mar. 2014 – Feb. 2016
Academic Excellence Scholarship, Ewha Womans University	Fall 2011, Spring 2012

PROFESSIONAL EXPERIENCE

AI Specialist Librarian   **Feb. 2021 – Apr. 2025**
Chung-Ang University Central Library   *Seoul, Korea*
- Designed a website guiding generative AI, including guidelines, educational videos, and trends.
- Delivered special lectures in a hybrid format, including "How to Use Generative AI Chatbot", "How to Write Academic Papers in Science and Engineering", and "Academic Database Utilization".
- Led the "CAU ChatGPT Prompt Engineering Competition" and AI-related seminars.
- Organized research performance data, recommended tailored information through the Research Management Information System (RIMS), and analyzed and reported on AI research trends for the College of Engineering and Software faculty.

Senior Researcher   **Jul. 2017 – Jul. 2019**
LG Electronics Chief Technology Officer (CTO) AI Lab   *Seoul, Korea*
Projects: 1) Marriott Hotel Concierge WebOS Smart TV Voice Assistant (VA) (English)   *03/2019-07/2019*
*   2) LG WebOS Smart TV VA 'DeepThinQ' (Japanese)*   *06/2018-07/2019*
*   3) Incheon Airport & PyeongChang Olympic Guide Robot VA (Japanese)*   *01/2018-09/2018*
*   4) LG Mobile Voice Assistant 'Q-Voice' (Korean)*   *01/2018-05/2018*
- Constructed NER models of TV program guides, road navigation, schedule alert functions, etc. for each NLP project in Korean, English, and Japanese.
- Formulated NER rules using regular expressions and trained NER models with the Support Vector Machine (SVM).
- Oversaw NLP projects in communication with native English- and Japanese-speaking researchers.
- Achieved ~99% accuracy in closed tests and ~85% in open domain tests for projects 2) and 3).
- Conducted Quality Assurance (QA) testing before product launches and resolved post-launch customer issues.
- Registered patents in South Korea, the U.S., and under PCT for unifying and improving NLP models.

Researcher   **Jun. 2016 – Jun. 2017**
Lotte Innovate IT Lab, Lotte Group AI TFT - "Lotte IBM AI Consulting"   *Seoul, Korea*
- Implemented a pilot hotel concierge chatbot guiding room services, hotel facilities, etc., using IBM Watson APIs such as Conversation and Visual Recognition; successfully completed the 2016 IBM Watson Hackathon.
- Designed AI-based trend prediction system architecture, 'Lotte Confectionery Intelligence Advisor (LCIA)' for new product development using IBM Watson Explorer, and systemized requirements by communicating with LC marketers.
- Applied social media text mining/analysis models to predict future food trends when categorizing product properties.
- Contributed to transforming the new product development process from a top-down to a big data-driven approach, improving decision-making efficiency.
- Co-developed an AI-based shopping advisor chatbot 'Lotte Shopping Advisor (LOSA)' for Lotte Department Store using IBM Watson's deep learning recommendation engine, conversation, and visual recognition APIs.

PROFESSIONAL MEMBERSHIPS

Association for Information Science and Technology (ASIS&T)	Aug. 2025 – Present
Observational Health Data Sciences and Informatics (OHDSI)	Jun. 2025 – Present
American Medical Informatics Association (AMIA)	Sep. 2025 – Dec. 2025
Korean Library and Information Science Society	Mar. 2025 – Feb. 2026

EXTRACURRICULAR AND VOLUNTEER EXPERIENCE

FSU Omicron Delta Kappa (National Leadership Honor Society)	Mar. 2026 – Present
UTT Language Exchange Group 'Tandem' (Korean, French, and Chinese)	Mar. 2015 – June 2015
NTU Korean Language Education Volunteer Group	Sep. 2012 – Dec. 2012
Seoul University Association Reading and Discussion Group	Mar. 2011 – Dec. 2011
Middle School Tutor, Seoul Seodaemun Community Self-sufficiency Center	Mar. 2012 – Jun. 2012
Volunteer, Ewha Womans University Center for Child Development and Disability	Sep. 2011 – Dec. 2011

PROFICIENCY IN SKILLS

Programming: Python, R (intermediate), SQL, Java (basic)
Languages: Korean (native), English (proficient), French (elementary)