**Minjun Shim**

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**INTERESTS**

AI Agent, AI business model, Generative AI, RAG

**EDUCATION**

Kyunghee University **Mar 2022 – Aug 2025 (Expected)**

*Undergraduate Student*  Seoul,South Korea

• BBA in Big Data Analytics **(One Semester Early Graduation)**

• **GPA: 4.1/4.3** (**Highest GPA** in the Big Data Analytics Department)

**RESEARCH EXPERIENCE**

**AI & BM Lab** ([Homepage](https://bmer.net/)),Kyunghee University **Apr 2023 – Present**

*Undergraduate Researcher (Adviser: Professor Kyoung Jun Lee).* Seoul,South Korea

• Conducted research on developing LLM-based services for business applications, with a focus on AI Agents and solutions for small business owners.

• Proposed service ideas and analyzed the latest AI models and industry trends to enhance applicability and innovation.

• Participated in a research project in collaboration with IBK Industrial Bank of Korea and Harex InfoTech.

• Presented research findings at conferences (KMIS, KIISS etc.).

**LST Lab** ([Homepage](https://www.lstlab.org/)), Pohang University of Science and Technology  **Jul 2024 – Aug 2024**

*Undergraduate Researcher (Adviser: Professor Young Myoung Ko).* Pohang, South Korea

• Participated in a research project in collaboration with Samsung Electronics.

• Explored methods to enhance RAG (Retrieval-Augmented Generation) performance and investigated sLLM models optimized for on-device AI.

**PROJECTS**

**National Research Foundation of Korea: Analysis of the socio-economic implications of the transition to platform-based services in the digital transformation and new normal era Sep 2024 – Present**

•Analyzing the impact of digital platforms on business and consumer behaviors post-pandemic, using comprehensive sector-specific input-output tables to understand the economic and social shifts driven by the growing reliance on online services.

**Samsung Electronics: Graph-based Knowledge Augmentation Method for Personalized Recommendation Research Project**

**Jul 2024 – Aug 2024**

• Explored the implementation of GraphRAG for generating knowledge graphs from textual data, leveraging LLM-based prompt engineering to organize text into structured entities and enhance personalized recommendation systems.

• Conducted experiments to determine the optimal AI model for on-device applications, evaluating various LLMs based on performance, language support, and commercial usability suitable for a mobile environment.

**Harex Infotech: User-Centric AI Research and Service Development Project**

**Apr 2023 – May 2024**

• Contributing to the development of the **AI Agent** "JarvisJust," utilizing LLM (Large Language Model) and RAG (Retrieval-Augmented Generation) technologies to match individuals with people, products, or businesses in real-time. **[**[**News**](https://www.aitimes.com/news/articleView.html?idxno=157706)**] [**[**Demo video**](https://drive.google.com/drive/folders/1TIbbpZjx56BeG38sEWdP9zNhfcRvHHOV?usp=sharing)**]**

• Designed "Persuasive Marketing Intelligence," a service that uses the OpenAI’s GPT-4 API to generate and send personalized marketing messages, enhancing merchant campaigns through advanced prompt engineering based on persuasion theory.

• Developed "Event Promotion," an automated poster generation model employing GPT-3.5 API and Stability AI's Stable Diffusion API, streamlining marketing for small business owners with custom slogans and images. **[**[**Demo video**](https://drive.google.com/file/d/1f9d7WbS9cPxA3j1-kOF1bnLq6wqKTYc5/view?usp=sharing)**]**

• Developed a voice-enabled, context-aware Conversational Commerce service with GPT-3.5 API and the Whisper library, significantly improving user experience and reducing costs for small businesses through generative AI. **[**[**Demo video**](https://drive.google.com/file/d/1PrbfRrDyiu212JpN6NGvb2kiRWQFdOWe/view?usp=sharing)**]**

**IBK (Industrial Bank of Korea): Ways to Utilize Generative AI in Finance Research Project**

**May 2023 – Nov 2023**

• Developed the **"Policy Fund GPT"**, enhancing the capability of Industrial Bank of Korea employees to comprehend and adapt to frequently changing financial policies and regulations, thereby facilitating immediate access and application of critical information during customer consultations.

• Streamlined the retrieval of essential data from an extensive policy document database by **integrating a fine-tuned LLM (LLaMA 2, GPT-3.5) with RAG** technology, trained onpolicy fund documents.

• Developed a system integrating Naver Clova OCR and GPT API to convert **5,871 pages of IBK policy fund documents into 28,579 fine-tuning Q&A datasets** for LLM training, improving document processing speed compared to manual work and enhancing OCR extraction accuracy.

**SCHOLARSHIPS AND AWARDS**

**3rd Place** **in 2024 Korean Society of Management Science AI/OR Business Challenge**

•Awarded for improving RAG search accuracy by addressing the limitations of word similarity-based search in VectorRAG through the introduction of GraphRAG, a knowledge graph-based RAG approach.

**3rd Place** **in 2024 Chonnam Public/Big Data Utilization Idea Contest** **[**[**News**](https://www.etnews.com/20240813000244)**]**

• Awarded for proposing an innovative approach to address banking accessibility issues in aging regions by identifying ‘Financial Deserts’ location through clustering analysis and suggesting bus-based visiting bank services using **DBSCAN clustering.**

**Excellence Award** in Machine Learning Research Presentation, *Kyunghee University,* 2024

Undergraduate Research Assistant Scholarship, *Kyunghee University*, 2024-1, 2024-2

Academic Excellence Scholarship, *Kyunghee University*, 2023-2, 2024-1, 2024-2

**EXTRACURRICULAR ACTIVITIES**

**Perplexity Campus Strategist Jan 2025 – Present**

• Promoting Perplexity AI to professors and university students, developing and executing promotional events tailored for Korean students.

Data science club ‘CODE’ **Sep 2022 – Jun 2023**

*Co-Founder*

• Co-founded the first departmental club for the Big Data Analytics Department, dedicated to collaborative study in data science.

Business club ‘People Love Management Society’ **Mar 2022 – Aug 2022**

• Proposed a university student engagement strategy for ‘Typed’, a startup providing a knowledge-based document collaboration tool.

**SKILLS**

Python, R, SQL

**CERTIFICATION**

English Proficiency: TOEIC 925, TOEFL(IBT) 84, TOEFL(ITP) 593

ADSP (Advanced Data Analytics Semi-Professional)

**CONFERENCES AND PUBLICATIONS**

**(KCI) M. Shim**, B. Jeong. Can People Detect AI-Generated Essays in Non-English Languages? A Study on AI vs. Human Writing in Korean. *International Journal of Advanced Smart Convergence Vol.14 No.1 101-110,* Mar 2025 **[**[**pdf**](https://drive.google.com/file/d/1iUdEFJfcag8YNeVPFEVKAFvpFMiSnM6X/view?usp=sharing)**]**

G. Jeong, B. Jeong, G. Ok, **M. Shim**, K. Lee. Implementation of multimodal AI-based Taxi Call Agent service. *Proceedings of the 2024 Fall Conference of the Korea Society of Management Information Systems,* Nov 2024. **[**[**pdf**](https://drive.google.com/file/d/19PNZagpP8E5k-W9rgAx29PV5uUw5X65W/view?usp=sharing)**]**

E. Yun, S. Lee, **M. Shim**, E. Ahn, B. Jeong, K. Lee. Improving RAG performance of interactive matching agent using meta information and knowledge graph. *Proceedings of the 2024 Fall Conference of the Korea Intelligent Information Systems Society,* Nov 2024. **[**[**pdf**](https://drive.google.com/file/d/1yiWRMmnxhKiaQMZqoqSy2dCq1RGi2Z8V/view?usp=sharing)**]**

K. Lee, E. Yun, S. Lee, B. Jeong, **M. Shim**, G. Jeong, G. Ok, E. Ahn, D. Kim, D. Park. Interactive matching agent based on LLM and RAG Prompt engineering process and optimization issues. *Proceedings of the 2024 Spring Conference of the Korea Intelligent Information Systems Society,* May 2024. **[**[**pdf**](https://drive.google.com/file/d/1wC6i3jgP6Qy7cBzNxRFL3iz9nbKyVpZD/view?usp=sharing)**]**

G. Lee, **M. Shim**, D. Oh, B. Jeong, K. Lee. Generative AI-powered Personalized marketing message service: Persuasive Marketing Intelligence*. Proceedings of the 2023 Fall Conference of the Korea Internet Electronic Commerce Association,* Nov 2023. **[**[**pdf]**](https://drive.google.com/file/d/1vk9b_VOnA1urJCcz6ZfqQ-SZ56OTjwpE/view?usp=sharing)

B. Jeong, S. Kim, D. Oh, G. Ok, **M. Shim**, Y. Lee, R. Lee, K. Lee, S. Park, D. Kim*.* Development of an Interactive Financial Product Recommendation Service Combining RAG and Fine-Tuning of Pre-trained Models. *Proceedings of the 2023 Fall Conference of the Korea Society of Management Information Systems,* Nov 2023. **[**[**pdf**](https://drive.google.com/file/d/1EHCg50-proKlk2RzOunmhQtX25r7_Pkg/view?usp=sharing)**]**

K. Ok, D. Oh, **M. Shim**, G. Lee, S. Kim, B. Jeong, K. Lee. Commerce service development using generative AI: order fulfillment and customized event promotion. *Proceedings of the 2023 Spring Conference of the Korea Society of Management Information Systems,* June 2023, 718-724.**[**[**pdf**](https://drive.google.com/file/d/1iUWUmHzfSd656kW1bgGVUmutJ8yT9yKQ/view?usp=sharing)**]**