

Su Young Bae

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Research Interest

[A] **Trustworthy AI** : Bias & Hallucination Mitigation, AI Ethics/Morality, Evaluation

[B] **Robust and Efficient Learning** : Robust Learning, Reinforcement Learning, RAG, Recommendation System

[C] **Agentic AI** : Long Horizon Agent, Multi-Agent System, Memory Management, Self-evolving

[D] **Code & Data Intelligence** : Repository-Level Code Documentation / Generation / Localization, Evaluation, Text-to-SQL, Table Understanding

Education

03/2024 – Present Ph.D., Department of Artificial Intelligence (GPA: 3.93/4.5)
Sungkyunkwan University, Suwon

03/2022 – 02/2024 M.S., Department of Artificial Intelligence (GPA: 4.13/4.5)
Sungkyunkwan University, Suwon

03/2018 – 02/2022 B.S., Department of Software (GPA: 3.56/4.5)
Sungkyunkwan University, Suwon

International Papers

12/2026 [C] [D] “Remember Your Trace: Memory-Guided Long-Horizon Agentic Framework for Consistent and Hierarchical Repository-Level Code Documentation”
Suyoung Bae, Jaehoon Lee, Changkyu Choi, YunSeok Choi, Jee-Hyong Lee
: The Fortieth Annual Conference on Neural Information Processing Systems (**NeurIPS 2026**)

10/2026 [B] [C] [D] “A²Agent: Action-Aware Reinforcement Learning for Repository-Level Code Localization Agents”
Doyeon Kim*, **Suyoung Bae***, Yumin Lee, Jee-Hyong Lee (* : equal contribution)
: The 2026 Conference on Empirical Methods in Natural Language Processing (**EMNLP 2026 Main**)

10/2026 [C] “InterventionBench: Can LLM Agents Adapt to Mid-task User Interventions?”
Jaehoon Lee, **Suyoung Bae**, Jin-Seop Lee, YunSeok Choi, Jee-Hyong Lee
: The 2026 Conference on Empirical Methods in Natural Language Processing (**EMNLP 2026 Findings**)

05/2026 [D] “PubTables-QA: A Multi-Page Table Visual Question Answering for Cross-Page Table Reasoning”
Jiin Han, **Suyoung Bae**, Yerim Choi, Sangyun Lee, Kyutae Kim, RyunHo Kim, Jee-Hyong Lee, Changkyu Choi, YunSeok Choi
: Submitted

07/2026 [A] [D] “ReFEree: Reference-Free and Fine-Grained Method for Evaluating Factual Consistency in Real-World Code Summarization”
Suyoung Bae, CheolWon Na, Jaehoon Lee, Yumin Lee, YunSeok Choi, Jee-Hyong Lee
: The 64th Annual Meeting of the Association for Computational Linguistics (**ACL 2026 Main**)

- 07/2026 [D] “EXPO-SQL: Execution-based Clause-level Policy Optimization for Text-to-SQL”
Jaehoon Lee, CheolWon Na, **Suyoung Bae**, Jin-Seop Lee, Jihyung Lee, YunSeok Choi, Jee-Hyong Lee
: The 64th Annual Meeting of the Association for Computational Linguistics (**ACL 2026 Findings**)
- 07/2026 [B] “UCGRec: User-Centric Graph Learning for LLM-based Sequential Recommendation”
CheolWon Na, HanBeul Kim, **Suyoung Bae**, YunSeok Choi, Jee-Hyong Lee
: The 64th Annual Meeting of the Association for Computational Linguistics (**ACL 2026 Findings**)
- 04/2026 [C] “Adversarial Robustness in LLM-Based Multi-Agent Trading Systems: A Systematic Vulnerability Analysis”
CheolWon Na, **Suyoung Bae**, Jaehoon Lee, Jee-Hyong Lee
(**ICLR 2026 Workshop Advances in Financial AI**)
- 04/2025 [A] “DeCAP: Context-Adaptive Prompt Generation for Debiasing Zero-shot Question Answering in Large Language Models”
Suyoung Bae, YunSeok Choi, Jee-Hyong Lee
: Annual Conference of the Nations of the Americas Chapter of the Association for Computational Linguistics (**NAACL 2025 Main**)
- 04/2025 [B] “SALAD: Improving Robustness and Generalization through Contrastive Learning with Structure-Aware and LLM-Driven Augmented Data”
Suyoung Bae*, Hyojun Kim*, YunSeok Choi, Jee-Hyong Lee (* : equal contribution)
: Annual Conference of the Nations of the Americas Chapter of the Association for Computational Linguistics (**NAACL 2025 Main**)
- 01/2025 [A] “CharMoral: A Character Morality Dataset for Morally Dynamic Character Analysis in Long-Form Narratives”
Suyoung Bae, Gunhee Cho , Boyang Li, Yun-Gyung Cheong
: Proceedings of the 31st International Conference on Computational Linguistics (**COLING 2025**)
- 02/2023 [A] “Predicting the Morality of a Character Using Character-Centric Embeddings”, **Su-Young Bae**, Eun-Chong Kim, Yun-Gyung Cheong
: International Conference on Big Data and Smart Computing (**BIGCOMP 2023**)
- 09/2022 “The CreativeSumm 2022 Shared Task: A Two-Stage Summarization Model using Scene Attributes.”
Eun-Chong Kim, Tae-Woo Yoo, Gun-Hee Cho, **Su-Young Bae**, Yun-Gyung Cheong,
: International Conference on Computational Linguistics (**COLING 2022**)

Domestic Papers

- 11/2025 “RFScore: Evaluating Factual Consistency of Project-Level Code Summary Using Reference-Free and Fine-Grained Manner”
Suyoung Bae, CheolWon Na, Jaehoon Lee, Yumin Lee, YunSeok Choi, Jee-Hyong Lee
: Korean Artificial Intelligence Association Conference (**CKAIA 2025**)
- 08/2025 “CPGRec: Collaborative and Personalized Graph Learning in Large Language Models for Sequential Recommendation”
Hanbeul Kim, Cheolwon Na, **Suyoung Bae**, Yunseok Choi and Jee-Hyong Lee
: Korean Artificial Intelligence Association Conference (**CKAIA 2025**)

04/2025	“Meaning-Preserving Query Rewriting and Query Reranking for Retrieval Augmented Generation” Insung Hwang, Suyoung Bae, Jaehoon Lee and Jee-Hyong Lee : KIIS Spring Conference (KIISE 2025)
04/2024	“RICE: Retrieval-Augmented Generation with Iterative Correction and Enhancement” Doyeon Kim, Suyoung Bae, Jaehoon Lee and Jee-Hyong Le : KIIS Spring Conference (KIISE 2024)
06/2022	“Can Language Model Learn Ethics? Predicting Characters’ Morality by Learning Character Embedding” Su-Young Bae, Eun-Chong Kim, Yun-Gyung Cheong : Korean Artificial Intelligence Association Fall Conference (JKAIA 202 3)
07/2022	“Improving Document Retrieval Model Multi-Domain Dialogue Dataset” Su-Young Bae, Eun-Chong Kim, Yun-Gyung Cheong, : Korea Computer Congress (KCC 2022)

Projects

07/2025 – Present	International collaborative research with Norway (Norway-Korea) AURORA: Advancing Universal Resource-Scarce Large Vision-Language Models Towards Robust and Reliable AI
07/2025 – Present	Basic Science Research Program through the National Research Foundation of Korea (NRF) : A Trustworthy Multi-Agent Systems for User-Centric Project-Level Code Documentation (project leader)
07/2025 – Present	AI Star Fellowship Support Program (IITP) : Development of Collaborative Intelligent Agent Technology for Human–AI Partnership, Participating Researcher
07/2024 – Present	Development of Open-Ended Alignment Fluxional AI for Ever-changing Environment and Value (ITRC) : Developing open-ended alignment AI, Participating Researcher
04/2024 – Present	Developing Multimodal Generative AI Talent for Industrial Convergence (IITP with 42MARU) : Development of Adaptive Text Generation Technology Reflecting the User's Multi-faceted Persona, Participating Researcher
2022 2023 2024 2025	Creative Autonomous Research Project (S.E.L.P) : Various Topics on Story character embedding, Story character ethics, Long-Text Summarization, Multimodal bias mitigation, Hallucination detection in LLMs
03/2022 – 12/2022	Collaborative story-making tool development project (with NCSOFT) : Character Analysis, story creation tool, and graph model development.
03/2021 – 07/2021	Undergraduate Research Project (URP) : GPT2 generated sentence qualification using the ROCStories dataset.
05/2019 – 12/2019	Co-operation Project (with Rambda 256) : Develop Sungkyunkwan University blockchain coin mobile service (SKKOIN).
05/2018 – 12/2018	Co-operation Project (with SKT) : Marketing, Data Collection, Preprocessing, Analyzing

Internship

08/2026 – 10/2026	Oslo University in Norway Research Internship
06/2023 – 08/2023	Nanyang Technological University (NTU) Research Internship
03/2021 – 02/2022	Sungkyunkwan University (SKKU) Undergraduate Research Internship

Award & Scholars

02/2026	Sungkyunkwan University Selection for Incentives for outstanding activities (1200\$)
02/2026 – Present	Scholarship for outstanding AI graduate students (1500\$ per semester)
09/2025 – 09/2027	Ph.D Fellowship in the National Research Foundation of Korea (NRF) (18000\$ per year)
09/2025 – 02/2026	Scholarship for outstanding AI graduate students (3000\$ per semester)
05/2024 - Present	Scholarship for outstanding Ph.D. students (3600\$ per year)
02/2023	Sungkyunkwan University Selection for Incentives for outstanding activities
10/2022 – 02/2024	Sungkyunkwan University BK21 Education Research Scholarship (8600\$ per year)
2022 2023 2024	Sungkyunkwan University AI Selection of Excellent Team for Creative Autonomous Research (S.E.L.F.)

Assistant & Reviewer

2025 – Present	NeurIPS, AACL, EMNLP, ACL Reviewer
12/2024 – 02/2025	Teaching Assistant (TA) for the Undergraduate Research Project (URP)
2022 2023	Teaching Assistant (TA) for the Computer Programming for Engineers course
09/2021 – 12/2021	Teaching Assistant (TA) for the Problem -Solving Algorithm course

Language study abroad

01/2020 – 01/2020	Software Silicon Valley IT Visiting Program (USA)
02/2020 – 06/2021	Summer Exchange Student (Czech Technical University, Czech Republic)

English skills

02/2023	OPic	IH (Intermediate High)
09/2021	GRE	Verbal/Quantitative/Writing: 144/168/3.0