

EUNHWAN PARK (朴殷煥)

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BIOGRAPHY

I am a research engineer at Buzzni, serving my mandatory military service as Technical Research Personnel. I obtained M.S. in Computer Science from Jeonbuk National University, where I was fortunate to be advised by Professor Seung-Hoon Na. During my M.S., I interned at NAVER Corporation, one of the biggest companies in the IT area from the Republic of Korea. Prior to M.S., I obtained a B.S. in Computer Science from Kookmin University in Feb 2021, also completed of first phase certification of Software Maestro 6th from the government of the Republic of Korea in Dec 2015.

My research interests lie in the area of natural language processing as follows: **Large Language Models, Retrieval-Augmented Generation, Information Retrieval, Multimodal, etc.**

EDUCATION

- **Jeonbuk National University** Jeonju, Republic of Korea
Master of Science in Computer Science
Advisor: Seung-Hoon Na
Major: Natural Language Processing
Mar 2021 - Feb 2023
- **Kookmin University** Seoul, Republic of Korea
Bachelor of Science in Computer Science
Advisor: Jun-Soo Choi
Mar 2016 - Feb 2021

EXPERIENCES

- **Buzzni.** Seoul, Republic of Korea
AI Research Engineer (Full-time, Technical Research Personnel)
Mar 2023 - Present
- **NAVER Corporation.** Remote
Internship (Full-time)
May 2021 - Aug 2021
- **Cognitive Computing Lab.** Jeonju, Republic of Korea
M.S. Student Researcher
Mar 2021 - Feb. 2023.
 - Funded by BK 21 (Brain Korea 21)
- **Software Maestro 6th.** Seoul, Republic of Korea
Software Engineer Mentee (Full-time)
July 2015 - Nov 2015
 - Funded by Ministry of Science, ICT, and Future Planning, Republic of Korea.

INTERNATIONAL PUBLICATIONS

- *: Equal Contribution
- **MERLIN: Multimodal Embedding Refinement via LLM-based Iterative Navigation for Text-Video Retrieval-Rerank Pipeline (pdf):** Donghoon Han*, **Eunhwan Park***, Gisang Lee*, Adam Lee, Nojun Kwak
arXiv Preprint, 2024.
- **RADCoT: Retrieval-Augmented Distillation to Specialization Models for Generating Chain-of-Thoughts in Query Expansion (pdf):** Sung-Min Lee*, **Eunhwan Park***, DongHyeon Jeon, Inho Kang, Seung-Hoon Na
The Proceedings of the 2024 Joint International Conference on Computational Linguistics, Language Resources and Evaluation (LREC-COLING, *short paper*), 2024.
- **Ask, Assess, and Refine: Rectifying Factual Consistency and Hallucination in LLMs with Metric-Guided Feedback Learning (pdf):** Dongyub Lee*, **Eunhwan Park***, Hodong Lee, Heuiseok Lim
The 18th Conference of the European Chapter of the Association for Computational Linguistics (EACL, *long paper*, main conference), 2024.
- **MAFiD: Moving Average Equipped Fusion-in-Decoder for Question Answering over Tabular and Textual Data (pdf):** Sung-Min Lee, **Eunhwan Park**, Daeryong Seo, Donghyeon Jeon, Inho Kang, Seung-Hoon Na
The 17th Conference of the European Chapter of the Association for Computational Linguistics (EACL Findings, *short paper*), 2023.
- **RINK: Reader-Inherited Evidence Reranker for Table-and-Text Open Domain Question Answering (pdf):** **Eunhwan Park**, Sung-Min Lee, Daeryong Seo, Seonhoon Kim, Inho Kang, Seung-Hoon Na
In the Proceedings of the 37th AAAI Conference on Artificial Intelligence (AAAI), acceptance rate: 19.6% (*long paper*, main conference), **oral presentation**, 2023.
- **SISER: Semantic-Infused Selective Graph Reasoning for Fact Verification (pdf):** **Eunhwan Park***, Jong-Hyeon Lee*, Donghyeon Jeon, Seonhoon Kim, Inho Kang, Seung-Hoon Na
In Proceedings of the 29th International Conference on Computational Linguistics (COLING), acceptance rate: 33.4% (*long paper*, main conference), 2022.

- **LM-BFF-MS: Improving Few-Shot Fine-tuning of Language Models based on Multiple Soft Demonstration Memory (pdf): Eunhwan Park**, Donghyeon Jeon, Seonhoon Kim, Inho Kang, Seung-Hoon Na
In Proceedings of the 60th Annual Meeting of the Association for Computational Linguistics (ACL), acceptance rate: 20.8% (*short paper*, main conference), 2022.

WORKSHOP PUBLICATIONS

- **Unleash the Potential of CLIP for Video Highlight Detection (to appear):** Donghoon Han*, Seunghyeon Seo*, **Eunhwan Park**, Seong-Uk Nam, Nojun Kwak
ELVM Workshop@CVPR 2024.
- **JBNU-CCLab at SemEval-2022 Task 7: DeBERTa for Identifying Plausible Clarifications in Instructional Texts (pdf):** Daewook Kang, Sung-Min Lee, **Eunhwan Park**, Seung-Hoon Na
In Proceedings of the 16th International Workshop on Semantic Evaluation (SemEval-2022), 2022.

DOMESTIC JOURNALS

- **R2FiD: Joint Reranker 기반 Fusion-In-Decoder를 이용한 오픈 도메인 테이블 질의 응답:** 이성민, **박은환**, 나승훈, 서대룡, 전동현, 강인호, 정보과학회 논문지, 2023.

DOMESTIC PUBLICATIONS

- **ChatGPT 기반 한국어 질의 응답 이해 분석:** **박은환**, 남성욱, 한동훈, 정근영, 고재현, 나승훈, 한국소프트웨어종합학술대회 (KSC 2023), Dec 2023.
- **Textual Entailment Feedback 기반 효율적인 문서 재순위화기:** 남성욱, 한동훈, **박은환**, 나승훈, 제 35회 한글 및 한국어 정보처리 학술대회, Oct 2023.
- **Prompting 기반 매개변수 효율적인 멀티 모달 영상 하이라이트 검출 연구:** 한동훈, 남성욱, **박은환**, 곽노준, 제 35회 한글 및 한국어 정보처리 학술대회, Oct 2023.
- **OFA를 이용한 멀티모달 이미지-텍스트 오픈도메인 질의응답:** 이성민, **박은환**, 서대룡, 전동현, 강인호, 나승훈, 한국소프트웨어종합학술대회 (KSC2022) 논문집, Dec 2022.
- **R2FiD: Joint Reranker 기반 Fusion-In-Decoder를 이용한 오픈 도메인 테이블 질의 응답:** 이성민, **박은환**, 나승훈, 서대룡, 전동현, 강인호, 제 34회 한글 및 한국어 정보처리 학술대회, Oct 2022., [\[우수 논문\]](#)
- **Prompting 기반 매개변수 효율적인 Few-Shot 학습:** **박은환**, 서대룡, 전동현, 강인호, 나승훈, 제 34회 한글 및 한국어 정보처리 학술대회, Oct 2022.
- **FiD를 이용한 멀티 모달 오픈 도메인 질의 응답:** **박은환**, 이성민, 서대룡, 전동현, 강인호, 나승훈, 제 34회 한글 및 한국어 정보처리 학술대회, Oct 2022.
- **사실 확인을 위한 그래프 기반 추론 및 계층적 구조 어텐션 결합 모델:** **박은환**, 나승훈, 신동욱, 전동현, 강인호, 한국 정보과학회 학술발표논문집 (KCC2022) 논문집, June 2022.
- **Pre-trained Continuous Prompts에 기반한 한국어 자연언어처리:** 이정, **박은환**, 나승훈, 한국 정보과학회 학술발표논문집 (KCC2022) 논문집, June 2022.
- **Prompt 기반 Few-shot Learning을 이용한 한국어 자연언어처리:** **박은환**, 나승훈, 신동욱, 김선훈, 강인호, 한국소프트웨어종합학술대회 (KSC2021) 논문집, Dec 2021.
- **Summary-to-Documents를 이용한 텍스트 생성 요약:** **박은환**, 나승훈, 신동욱, 김선훈, 강인호, 한국소프트웨어종합학술대회 (KSC2021) 논문집, Dec 2021.
- **증거와 Claim의 LM Perplexity를 이용한 Zero-shot 사실 검증:** **박은환**, 나승훈, 신동욱, 전동현, 강인호, 한국소프트웨어종합학술대회 (KSC2021) 논문집, Dec 2021.
- **PALM 기반 한국어 T5 개선: 기계독해 및 텍스트 요약으로의 응용:** **박은환**, 나승훈, 임준호, 김태형, 최윤수, 장두성, 제 33회 한글 및 한국어 정보처리 학술대회, Oct 2021.
- **SpanBERT를 이용한 한국어 자연언어처리: 기계 독해, 개체 연결, 의존 파싱:** **박은환**, 나승훈, 김태형, 최윤수, 장두성, 한국 정보과학회 학술발표 (KCC2021) 논문집, June 2021.
- **그래프 기반 증거 추론을 이용한 질의 응답에 대한 사실 여부 검증 연구:** **박은환**, 나승훈, 신동욱, 김선훈, 강인호, 한국 정보과학회 학술발표 (KCC2021) 논문집, June 2021.
- **그래프 합성곱 신경망 인코더와 계층 구조 디코더를 이용한 키워드 생성:** **박은환**, 나승훈, 한국소프트웨어종합학술대회 (KSC2020) 논문집, Dec 2020.

RESEARCH PROJECTS

- 언어모델 학습 알고리즘 및 데이터 선별 기술 개발: (주) 케이티
- Multimodal 오픈도메인 QA를 위한 데이터셋 증강 및 Foundation Model 개선: (주) 네이버
- 자연어처리 연구: 국내 대기업 - 대외비 연구 과제

PROFESSIONAL SERVICES

- ARR (ACL Rolling Review) Reviewer: 2023. 08 ~

TALKS

- (Talk) NAVER Search Colloquium 2022 (Poster Session): LM-BFF-MS: Improving Few-Shot Fine-tuning of Language Models based on Multiple Soft Demonstration Memory

HONORS AND AWARDS

- Bronze Prize in Korean Natural Language Processing Competition, National Institute of Korean Language, 2021.
- Encouragement Award in KSC 2020 Undergraduate/Junior Thesis Contest, 2021.
- Graduate Research Scholarship II, Jeonbuk National University, 2021.

SKILLS

- Programming Language: C++, Python, Java, JavaScript
- Deep Learning Framework: PyTorch
- Documentation: \LaTeX , Word

LANGUAGE

- Korean: Native
- English: Fluent (OPIc: IH (Intermediate High))