# TAEYOON (CONNOR) KWON

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### RESEARCH INTEREST

## Natural Language Processing, Machine Learning

Reasoning & Planning, LLM Agents, Embodied AI, Code LLMs, AI for Science

#### **EDUCATION**

#### Yonsei University | Advisor: Jinyoung Yeo

Sep. 2023 - Present

M.S. in Artificial Intelligence

### Hanyang University (ERICA)

Mar. 2017 - Feb. 2023

B.S. in Computer Science, Summa Cum Laude

GPA: 3.75/4.0

## Republic of Korea Army

Jan. 2018 - Sep. 2019

Seargent

#### Publications & Preprints

(\* Equal contribution)

### REFEREED CONFERENCE PAPER

## [C5] COFFEE-GYM: An Environment for Evaluating and Improving Natural Language Feedback on Erroneous Code [paper][demo]

Hyungjoo Chae\*, **Taeyoon Kwon**\*, Seungjun Moon\*, Yongho Song, Dongjin Kang, Kai Tzu-iunn Ong, Beong-woo Kwak, Seonghyeon Bae, Seung-won Hwang, Jinyoung Yeo

EMNLP'24: The 2024 Conference on Empirical Methods in Natural Language Processing. 2024

## [C4] Language Models as Compilers: Simulating Pseudocode Execution Improves Algorithmic Reasoning in Language Models [paper]

Hyungjoo Chae, Yeonghyeon Kim, Seungone Kim, Kai Tzu-iunn Ong, Beong-woo Kwak, Moohyeon Kim, Seonghwan Kim, **Taeyoon Kwon**, Jiwan Chung, Youngjae Yu, Jinyoung Yeo

EMNLP'24: The 2024 Conference on Empirical Methods in Natural Language Processing. 2024

## [C3] Can Large Language Models be Good Emotional Supporter? Mitigating Preference Bias on Emotional Support Conversation [paper]

Dongjin Kang\*, Sunghwan Kim\*, <u>Taeyoon Kwon</u>, Seungjun Moon, Hyunsouk Cho, Youngjae Yu, Dongha Lee, Jinyoung Yeo Outstanding Paper Award ACL'24: The 62nd Annual Meeting of the Association for Computational Linguistics. 2024

## [C2] Large Language Models are Clinical Reasoners: Reasoning-Aware Diagnosis Framework with Prompt-Generated Rationales [paper]

Taeyoon Kwon\*, Kai Tzu-iunn Ong\*, Dongjin Kang, Seungjun Moon, Jeong Ryong Lee, Dosik Hwang, Yongsik Sim, Beomseok Sohn, Dongha Lee, Jinyoung Yeo

AAAI'24: The 38th Annual AAAI Conference on Artificial Intelligence. 2024

#### [C1] Dialogue Chain-of-Thought Distillation for Commonsense-aware Conversational Agents [paper]

Hyungjoo Chae\*, Yongho Song\*, Kai Tzu-iunn Ong, <u>Taeyoon Kwon</u>, Minjin Kim, Youngjae Yu, Dongha Lee, Dongyeop Kang, Jinyoung Yeo

EMNLP'23: The 2023 Conference on Empirical Methods in Natural Language Processing. 2023

#### Refereed Journal Paper

## [J1] Multi-task Deep Learning for Joint Detection of Necrotizing Viral and Non-infectious Retinitis from Common Blood and Serology Test Data [paper]

Kai Tzu-iunn Ong\*, <u>Taeyoon Kwon</u>\*, Harok Jang, Min Kim, Christopher Seungkyu Lee, Suk Ho Byeon, Sung Soo Kim, Jinyoung Yeo, Eun Young Choi

IOVS: Investigative Ophthalmology & Visual Science, 2024.

### PREPRINT

### [P4] Evaluating Robustness of Reward Models for Mathematical Reasoning [paper]

Sunghwan Kim\*, Dongjin Kang\*, <u>Taeyoon Kwon</u>, Hyungjoo Chae, Jungsoo Won, Dongha Lee, Jinyoung Yeo Arxiv preprint

## [P3] Large Language Models Are Self-Taught Reasoners: Enhancing LLM Applications via Tailored Problem-Solving Demonstrations [paper]

Kai Tzu-iunn $\mathrm{Ong}^*,$  Taeyoon Kwon, Jinyoung Yeo

Arxiv preprint

## [P2] Theanine: Revisiting Memory Management in Long-term Conversations with Timeline-augmented Response Generation [paper]

Seo Hyun Kim\*, Kai Tzu-iunn Ong\*, <u>Taeyoon Kwon</u>, Namyoung Kim, Keummin Ka, SeongHyeon Bae, Yohan Jo, Seung-won Hwang, Dongha Lee, Jinyoung Yeo Arxiv preprint

### [P1] Coffee: Boost Your Code LLMs by Fixing Bugs with Feedback [paper]

Seungjun Moon\*, Yongho Song\*, Hyungjoo Chae\*, <u>Taeyoon Kwon</u>, Dongjin Kang, Kai Tzu-iunn Ong, Seung-won Hwang, Jinyoung Yeo Arxiv preprint

#### Teaching Assistant

Introduction to Artificial Intelligence (AAI2250)   Yonsei University, Seoul, South Korea	Sep. 2024 - Dec. 2024
Introduction to Natural Language Processing   SKT Academy, Seoul, South Korea	Jul. 2024
AI Expert Class   Samsung, Seoul, South Korea	Jul. 2024
Natural Language Processing (AAI3301)   Yonsei University, Seoul, South Korea	Mar. 2024 - Jun. 2024
Introduction to Natural Language Processing   SKT Academy, Seoul, South Korea	Aug. 2023

### AWARDS & HONORS

Outstanding Paper Award   ACL'24	2024
AI Graduate School Support Scholarship   Yonsei University	2023
Summa Cum Laude   Hanyang ERICA University	2023
Academic Excellence Scholarship   Hanyang ERICA University	$2022\hbox{-}2, 2020\hbox{-}2, 2017\hbox{-}2, 2017\hbox{-}1$

#### Research & Work Experience

## $\mathbf{Market\ Designers\ Inc.\ -\ Tutoring\ |\ Seoul,\ South\ Korea}$

Part-time Research Scientist and NLP Engineer

- Lead project solving real-world scenarios by deploying LLM-driven applications
- Contribute to development of LLM-based English tutoring system
- Participate in constructing a continuous integration system for chatbot content

Convei Lab | Yonsei University, Seoul, South Korea

Oct. 2022 - Sep. 2023

Mar. 2023 - Aug. 2024

Undergraduate Research Intern

- Advisor: Jinyoung Yeo
- Led project developing novel framework for diagnosis leveraging LLMs' reasoning capabilities
- Co-led project applying ML/DL techniques in medical domain, resulting in journal publication [J1]

Data Science Lab | Hanyang ERICA University, Ansan, South Korea

Jun. 2022 - Nov. 2022

Undergraduate Research Intern

- Advisor: Woohwan Jung
- Contributed to project enhancing low-resource fine-grained named entity recognition

SE Lab | Hanyang ERICA University, Ansan, South Korea

Feb. 2021 - Jun. 2022

Undergraduate Research Intern

- Advisor: Scott Uk-Jin Lee
- Participant in a project about measuring technical dept in ML/DL systems
- Studied fundamentals of software engineering and ML/DL