

# Chaewoon Ki

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## RESEARCH INTERESTS

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Reasoning & Reliability, Agentic AI, Self-Evolving Memory, LLM Applications

## EDUCATION

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**KAIST (Korea Advanced Institute of Science and Technology)** Mar 2022 – Aug 2026  
*B.S. in Computer Science, Specialized Track in Artificial Intelligence* Daejeon, South Korea

- **GPA:** 3.74 / 4.3
- **Coursework:** Machine Learning, Natural Language Processing, Introduction to AI, Machine Learning for 3D Data

**New York University** Jan 2025 – May 2025  
*Minor in Biomolecular Science (Exchange Program)* New York, NY, USA

- **GPA:** 4.0 / 4.0

## PUBLICATIONS

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### [C1] PersonaTrail: Benchmarking Personalized Web Agents through Browsing Trails

Seungbin Yang\*, **Chaewoon Ki**\*, Dohyun Lee, Jaegul Choo, ChaeHun Park.

*In submission, EMNLP 2026.* (\* equal contribution)

## RESEARCH EXPERIENCE

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**DAVIAN Lab, KAIST (PI: Prof. Jaegul Choo)** Nov 2025 – Present  
*Undergraduate Research Intern* Daejeon, South Korea

- Co-first author on **PersonaTrail**, a benchmark evaluating an agent's ability to infer users' implicit preferences from raw browsing histories under under-specified queries
- Built a two-level memory framework (**PACMEM**) separating factual memory (task-level navigation logs) and preference memory (long-term behavioral patterns), with embedding-based retrieval and LLM reranking to fit context constraints
- Designed the benchmark pipeline (website curation, query templates, trajectory rollout) and personalization metrics; served open-source LLMs (Llama 4 Scout, Qwen) via vLLM on H200 GPUs

**SynBi Lab, KAIST (PI: Prof. Gwansu Yi)** Jul 2024 – Jan 2025  
*Individual Study* Daejeon, South Korea

- Contributed to AI-driven drug-target binding research; implemented a GNN-based protein pre-training module for a fragment-based drug generation model
- Applied a Graph Autoencoder to compress high-dimensional protein graph data into structure-preserving representations for downstream learning

## WORK EXPERIENCE

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**Pebblous** Dec 2023 – Jul 2024  
*Research Intern, Data Science Team* South Korea

- Collected and preprocessed 8 public battery datasets (NASA PCoE, CALCE CS2, etc.) into a unified pipeline across heterogeneous data environments
- Ran comparative ML/DL experiments (LSTM, GRU, LightGBM, XGBoost) via PyCaret AutoML; identified LightGBM as the top performer and uncovered a DL shifting artifact, and authored a research paper on SOH prediction methods

## PROJECTS

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### Fitfor – Exercise Recommendation Platform for Wheelchair Users

Fall 2024

- Redefined the problem scope through direct interviews with wheelchair users, pivoting to an adaptive exercise recommendation system based on individual physical capability
- Built an LLM-based adaptive recommendation pipeline (FastAPI, Next.js, OpenAI API); **won the People's Choice Award** at Kakao Impact's "Tech for Impact" program

### FOSSLight Dataset Scanner – Industry Collaboration with LG Electronics

Fall 2025

- Built a CLI tool that recursively traverses Hugging Face/GitHub dependencies to automatically analyze open-source model and dataset licenses, with an LLM-based README analysis module replacing brittle regex rules
- Constructed an 80-case evaluation set; achieved **F1 97.56%** (Accuracy 95.24%, Precision 100%, Recall 95.24%)

### Detecting and Separating AI-Generated Voices

Summer–Fall 2024

- Built a Res2Net-based detector for genuine vs. AI-generated voices, reaching **Top 20%** at the Dacon SW-Centered University AI Competition
- Extended the work to speech separation (Asymmetric Encoder-Decoder) to handle the separation bottleneck, covering human-animal mixed audio; improved **SI-SNRi by +2.3 dB** and SDRi by +1.96 dB over baseline, winning 2nd place in the Introduction to AI course competition

## SKILLS

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**AI / ML:** LLM Web Agents, RAG, Agent Memory Systems, Context Engineering, Embedding-based Retrieval

**Frameworks & Tools:** PyTorch, FastAPI, Playwright, Next.js, vLLM, Vector DB

**Programming:** Python, C/C++, Java, SQL

**Languages:** Korean (Native), English (TOEIC 960, OPIc AL)

## HONORS & AWARDS

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KAIST Academic Scholarship, full tuition (2022–2026)

College of Engineering Dean's List, top 3% (Fall 2024)

KIAT Korea–U.S. Advanced Industry Exchange Scholarship (Spring 2025)

Lim Mi-Sook Scholarship, awarded for leadership (Fall 2024)