# TAEWOON KIM

AI Researcher & Engineer


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## SUMMARY


I am an AI researcher and engineer with a computer science foundation, skilled in solving complex AI problems using a wide range of approaches—from symbolic and discrete reasoning to reinforcement learning, deep learning, and generative modeling.

I offer B2B services, including full-stack AI/ML development, from model creation to integration with backend databases (SQL, NoSQL) and front-end frameworks (e.g., Gradio, Streamlit). I also provide research consulting and deployment support for real-world applications.


## TECHNICAL SKILLS

| | |
|---|---|
| **AI Research & Development** | Artificial General Intelligence, Deep Learning, Reinforcement Learning, Computer Vision, Natural Language Processing, Generative AI, Agentic AI |
| **Machine Learning Engineering** | PyTorch, TensorFlow, NumPy, SciPy, OpenCV |
| **Full-Stack & MLOps** | Flask, Gradio, Streamlit, Docker, GCP, AWS, Azure |
| **Data Management & Languages** | SQL, NoSQL, C++, Python, Java, JavaScript, Shell Script, Git |

## EXPERIENCE

Mar/2025 - Oct/2025

**Machine Learning Engineer** — **Byborg Enterprises, Luxembourg**

- Develop AI partners capable of generating human-like interactions across text, audio, video, and image modalities.
- Design and fine-tune large-scale generative models for realistic and personalized multimodal experiences.
- Collaborate across teams to bring research prototypes into production for real-time, user-facing systems.

Apr/2024 - Current

**Founder** — **HumemAI, Amsterdam, Netherlands**

- Architected a persistent memory system for AI (HumemAI) using a hybrid RAG pipeline over SQL and NoSQL databases to enable human-like memory operations and enhance natural language interaction.

Sep/2020 - Dec/2024

**Scientific Researcher** — **Learning and Reasoning Group, Vrije Universiteit Amsterdam, Netherlands**

- Carried out research in AI encompassing NLP, Computer Vision, Reinforcement Learning, Knowledge Graphs, etc.
- Taught and supervised B.Sc. and M.Sc. students on their courses and theses, e.g., Python, AI courses, board games with search algorithms, machine learning, etc.

Nov/2018 - Sep/2020

**Computer Vision Engineer** — **Nect, Germany**

- Worked with machine learning (mostly deep learning) to improve ID card and self verification processes.
- Mostly dealt with speech, image, and video data.
- Working at a start-up has enabled me to work closely with DevOps and Front-end developers and to better understand the big picture of AI companies.

Jan/2018 - Sep/2018

**Intern and M.Sc. Thesis Student** — **ABB, Germany**

- Applied robot vision with a RGBD camera.
- Trained computer vision deep learning models, e.g., ResNet, to extract features relevant for robotic pick and place skills.
- Used both RobotStudio and Robot Web Services based on RESTful APIs to interact with both virtual and real robot controllers.

Jul/2014 - Sep/2014

**B.Sc. Intern** — **Brain Signal Processing Lab, Korea University, South Korea**

- Learned mathematical and computer skills to process and visualize brain signals.
- Supervised by Jong-Hwan Lee

## EDUCATION

Sep/2020 - Current

**PhD. Artificial Intelligence, Vrije Universiteit Amsterdam, Netherlands**

- Titled *"A Machine With Human-Like Memory Systems"*. This machine is equipped with an external memory system, modeled with a knowledge graph, and uses reinforcement learning to learn essential human skills, such as managing memory, reasoning, exploring, etc.
- Supervised by Michael Cochez, Vincent François-Lavet, and Frank van Harmelen

Oct/2015
- Sep/2018

**M.Sc. Computer Science, Hamburg University of Technology, Germany**

- Focused on deep learning and computer vision.
- Wrote M.Sc. thesis *"One Shot Learning for Object Recognition in Pick and Insert Applications"* in collaboration with ABB and supervised by Alexander Schlaefer

Mar/2008
- Aug/2015

**B.Sc. Electrical Engineering, Yonsei University, South Korea**

- Focused on digital signal processing and computer vision.
- Wrote B.Sc. thesis *"Obstacle detection for the blind in C++ with OpenCV"*, supervised by Kwanghoon Sohn
- The lengthened period of study includes 2 years of mandatory social service.