## Profile

| Name | Jaeyoung Suh | Email | tjwodud04@gmail.com |
|---|---|---|---|
| GitHub | https://github.com/tjwodud04 | About page | https://tjwodud04.github.io/intro/?lang=en |
| Hugging Face | https://huggingface.co/dddsaty | LinkedIn | https://www.linkedin.com/in/jaeyoungsuh/ |

## Education

| Degree | Institution | Period |
|---|---|---|
| M.S. in Artificial Intelligence (Data Science) | Hanyang University Graduate School | Mar 2020 – Feb 2022 |
| B.S. in Computer Science | Korea National Institute for Lifelong Education (Bachelor's Degree by Examination) | Feb 2020 |
| B.A. in History and English Language & Literature | Yonsei University, Wonju Campus | Mar 2014 – Feb 2018 |

## Work Experience

| Company | Employment Type | Position | Period |
|---|---|---|---|
| AIPIA | Contract | AI Engineer (Image Generation) | Oct 2025 – Present |
| AIO2O | Full-time | AI Engineer (LLM) | Sep 2023 – Mar 2025 |
| BasgenBio | Full-time | AI Engineer (NLP, Computer Vision) | Mar 2022 – Sep 2023 |

## Publications

| Year | Title | PDF |
|---|---|---|
| 2025 | Jae Young Suh, Mingyu Jeon, "A Character-Based Korean Tourist Dialogue System with Proactive Recommendations and Live2D Embodiment", engrXiv preprint, 2025 | PDF |
| | Jae Young Suh, Mingyu Jeon, "Exploring Korean AI Companion Possibilities with Live2D and Empathic Voice Interaction", engrXiv preprint, 2025 | PDF |
| | Mingyu Jeon, Jaeyoung Suh, Suwan Cho, and Dohyeon Kim, "How Far Can LLMs Emulate Human Behavior?: A Strategic Analysis via the Buy-and-Sell Negotiation Game", arXiv preprint, 2025 | PDF |
| | Mingyu Jeon, Suwan Cho, and Jae Young Suh. "PPoGA: Predictive Plan-on-Graph with Action for Knowledge Graph Question Answering." Accepted to GMLLM 2025 (Frontiers in Graph Machine Learning for the Large Model Era), CIKM 2025 Workshop | PDF |
| | Jae Young Suh and Mingyu Jeon. "A Modular Prototype of Emotion-Aware Proactive Voice Agent with Live2D Embodiment." Accepted to ProActLLM 2025 (Proactive Conversational Information Seeking with Large Language Models), CIKM 2025 Workshop | PDF |
| 2024 | Mingyu Jeon and Jae Young Suh. "Mimicking Human Emotions: Persona-Driven Behavior of LLMs in the 'Buy and Sell' Negotiation Game." Language Gamification Workshop 2024 @ NeurIPS (Non-archival) | PDF |

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|---|---|---|---|
| | Jae Young Suh, Eunchan Lee, Yohan Jeong, Donggil Park, and Sungmin Ahn. "Teaching Large Language Models to Understand Jeju Island with Domain-Adaptive Pretraining." 2nd International Conference on Foundation and Large Language Models (FLLM), pp. 21–28, 2024. | PDF |
| | Jae Young Suh, Minsoo Kwak, Soo Yong Kim, and Hyoungseo Cho. "Making a Prototype of Seoul Historical Sites Chatbot Using LangChain." Journal of Electrical Electronics Engineering, 3(1): 1–5, 2024 | PDF |
| 2023 | 김성우, 서재영, 박지원, 김동관, "ChatGPT의 한국어 처리 능력 검증과 고찰." Proceedings of KCC 2023 (Korean Computer Congress 2023), pp. 286–288, 2023 | PDF |
| 2022 | Jae Young Suh. "Developing Speech Dialogue Systems of Social AI in Social Survival Game." Master's Thesis, Hanyang University, 2022. | PDF |
| 2021 | Jae Young Suh, Casey C. Bennett, Benjamin Weiss, Eunseo Yoon, Jihong Jeong, and Yejin Chae. "Development of Speech Dialogue Systems for Social AI in Cooperative Game Environments." IEEE Region 10 Symposium (TENSYMP 2021), pp. 1–4, 2021 | PDF |

## Certifications

| Certification | Date Obtained |
|---|---|
| OPIc IH | Sep 2025 |
| AICE(AI Certificate for Everyone) | Aug 2023 |
| ADsP(Advanced Data Analytics semi-Professional) | Nov 2022 |
| SQLD(SQL Developer) | Sep 2022 |
| Engineer Information Processing (정보처리기사) | May 2019 |

## Projects

| Year | Affiliation | Project | Description | |
|---|---|---|---|---|
| 2025 | | Live2D Character Voice Chatbot Demo | - Implemented a chatbot that responds to user speech by integrating OpenAI API with Live2D sample characters<br>- Tech Stack: gpt-4o-audio-preview, Whisper, Flask, JavaScript, Vercel | Initial: Link<br>Updated:<br>- Link<br>- Link |
| 2024 | | LLM-based Q&A System Prototype | - Built a real-estate search prototype using Crawl4AI, PandasAI, and Streamlit<br>Tech Stack: Python, OpenAI API, PandasAI, Streamlit | Link |
| 2024 | AIO2O | Jeju Tourism Data–based LLM Fine-tuning | - Conducted fine-tuning experiments using Llama 3 and Polyglot-ko models on Jeju tourism data<br>- Organized the findings into a research paper and submitted it to a conference<br>Tech Stack: Python, Llama3, Pytorch, Huggingface | |
| 2022 | BasgenBio | Biomedical Domain NER Experiment | - Performed Named Entity Recognition (NER) experiments on biomedical datasets from *Papers With Code*, classifying entities such as diseases, organizations, and genes | |

| | | | - Trained and compared models including BioBERT and BioLinkBERT using Simple Transformers and Flair frameworks<br>Tech Stack: Python, PyTorch, Simple Transformers, Flair | |
|---|---|---|---|---|
| 2021 | Hanyang University | HCI Project – Speech Dialogue System in Cooperative Game | Conducted experiments on human–AI interaction within the *Don't Starve Together* cooperative game environment as part of master's research<br>- Implemented rule-based STT/TTS responses and collected internal feedback for improvement of the voice interface<br>Tech Stack: pyttsx3, MS Azure STT/TTS, Lua (game mod integration) | Link |

## Supplementary Technical Document

| Year | Description |
|---|---|
| 2025 | Project<br>  • Development of a Korean Voice Chatbot Prototype with Live2D Character Interaction<br><br>Technologies & Tools<br>  • gpt-4o audio-preview, whisper-1, Live2D Cubism, Vercel, Flask, HTML/CSS, JavaScript<br><br>Overview<br>  • Developed a Korean voice-based chatbot integrated with Live2D animation to deliver a visually immersive conversational interface. Utilized the GPT-4o Audio Preview model to combine speech recognition (STT) and speech synthesis (TTS) into a unified architecture and designed a web-based environment capable of dialogue flow processing.<br><br>Roles & Contributions<br>  • Implemented STT/TTS functionalities based on GPT-4o Audio Preview and developed a Live2D interface that synchronized lip movements with character voice responses.<br>  • Designed the complete dialogue pipeline from user speech input to OpenAI API response generation, text logging, and animated voice output.<br>  • Deployed the system on Vercel for web testing and interaction.<br><br>Note<br>  • This project is continuously evolving through model replacements and further experimentation. Recent iterations have incorporated gpt-4o, gpt-4o-mini-search-preview, gpt-4o-mini-tts, whisper-1, with results being prepared for academic publication. |
| | Project<br>  • MCP Implementation for Claude Desktop using Korea Tourism Organization API<br><br>Technologies & Tools<br>  • FastMCP, Claude Desktop App, Cursor |

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| | **Overview**<br>• Developed an MCP (Model Context Protocol) that enables Claude Desktop to access and respond to tourism information using public data provided by the Korea Tourism Organization. Implemented data communication between Claude Desktop and external APIs via the FastMCP library, enabling retrieval of tourism details based on user queries.<br><br>**Roles & Contributions**<br>• Integrated the Korea Tourism Organization's public API to retrieve regional tourism information.<br>• Developed an MCP module using FastMCP and Cursor to handle data communication between Claude Desktop and external APIs. |
| 2024 | **Project**<br>• Real Estate Search Proof-of-Concept (PoC)<br><br>**Technologies & Tools**<br>• Crawl4AI, PandasAI, OpenAI API, Pandas, Streamlit<br><br>**Overview**<br>• Built a prototype Q&A system capable of interpreting natural language queries (e.g., "Apartments in Gangnam under 1 billion KRW, 30 pyeong or larger") and returning filtered real-estate information in tabular form. Combined PandasAI and OpenAI API to generate contextual responses based on collected datasets.<br><br>**Roles & Contributions**<br>• Collected real-estate data from the web using Crawl4AI and processed it into structured tables with PandasAI.<br>• Implemented a Streamlit interface for interactive query input and result visualization. |
| | **Project**<br>• Fine-Tuning Llama 3 with Small-Scale Jeju Tourism Data<br><br>**Technologies & Tools**<br>• Hugging Face Transformers, LoRA, OpenAI API<br><br>**Overview**<br>• Fine-tuned the Llama 3 model for Korean question-answering (QA) tasks using Jeju tourism data owned by the company. The project aimed to test whether domain-specific responses could be effectively generated from small datasets.<br><br>**Roles & Contributions**<br>• Performed fine-tuning of the Llama 3 model using the Hugging Face library.<br>• Compiled and published the experimental results in an academic conference paper. |
| 2021 | **Project**<br>• Development of a Speech Dialogue System in Cooperative Game Environments<br><br>**Technologies & Tools** |

• OBS Studio, Zoom, MS Azure STT/TTS, pyttsx3, Loomie Virtual Avatar, Excel / Google Sheets

Overview

• Master's-level research project based on the *Don't Starve Together* game environment, where an AI character cooperated with human players via speech interaction. Designed a rule-based speech dialogue system to simulate AI-human cooperation and validated its functionality through gameplay experiments.

Roles & Contributions

• Designed a speech output structure that generated dialogue based on in-game contexts and integrated it with the Loomie virtual avatar for real-time rule-based interaction.
• Conducted interaction tests with student participants and identified areas for improvement based on experimental feedback.

# Brief Self-Introduction

I am passionate about creating experiences where technology naturally connects with people. Since conducting research on voice-based AI in graduate school, I have consistently explored conversational systems, LLMs, and multimodal interfaces. I thrive on the cycle of learning through experimentation, prototyping ideas, and iteratively improving the results.

In my professional career, I have primarily leveraged the OpenAI API and open-source models for tasks such as image generation, LLM-based QA, domain model tuning, and prompt engineering. My focus has been on enhancing model performance and stability through image model fine-tuning, designing API integration workflows, and optimizing prompts.
I am also actively engaged in research. Through papers on LLM behavior analysis in negotiation games, emotion-aware voice agents, Knowledge Graph-based QA, and domain pre-training, I have examined the mechanics of conversational AI and agent systems from various perspectives. I am fascinated by the process of interpreting user intent and designing information flows that enable natural interactions.

My work style favors rapid prototyping of small units and incremental improvements based on real-world performance. In collaboration, I value documentation as a critical tool. I believe that well-maintained records align the team, help colleagues quickly grasp context, and build a knowledge base that reduces redundancy and fosters better structural solutions.

Looking ahead, I aim to focus on designing conversational systems that approach humans naturally or LLM-based agents with deep domain understanding. I aspire to remain an engineer who grows consistently learning by doing, rebuilding what I learn, and refining it into something better.