Jeongsik Park

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Education

University of Southern California Master of Science, Computer Science (AI Specialization) May 2026
University of Texas at Dallas Bachelor of Science, Computer Science (GPA: 3.94) May 2024

Technical Skills

AI Eng. Python, PyTorch, LangGraph, LangChain, LLM, VLM, RAG, AI Avatar
DevOps AWS, Docker, Kubernetes, Helm, Terraform, Prometheus, Grafana, Bash, Flask, FastAPI, REST API
Others SQL, C, C++, Java, React, LaTeX

Publications

[1] (**EMNLP** 2025 Findings) **MemeInterpret: Towards An All-in-One Dataset for Meme Understanding** [link]
J. Park., *et al* | Fine-Tuning (LLaVA, T5, CLIP), LLM-as-a-judge, PEFT (Quantization), Error-Analysis

[2] (**SIGdial** 2024) **MemeIntent: Benchmarking Intent Description Generation for Memes** [link]
J. Park., *et al* | LLM/VLM, Evaluation (n-gram, embedding, human), Synthetic-data Generation, Data-Annotation

[3] (under review) **Active Learning for Hate Speech Detection**
J. Park., e*t al* | Active-learning, Data-mining, Rule-based ML, Fine-tuning (BERTweet)

Work Experience

General Electric – GE HealthCare May 2025 – Present
AI Engineer Intern/Co-op Bellevue, WA

- Building end-to-end autonomous X-ray exam environment to be showcased at RSNA 2025 [link].
- Orchestrated patient check-in, instruction, and pose-detection LLM/VLM agents using LangGraph to coordinate task-level and multi-agent workflows.
- Built an LLM-as-a-Judge pipeline with asynchronous and batch inference, improving latency by 12× and serving as a supplementary judge to enhance quantitative evaluation reliability. Integrated structured output via LangChain's PydanticOutputParser, reducing post-processing costs.
- Automated deployment of NVIDIA Digital Human Blueprint on AWS using Terraform (Infra as Code), reducing setup time to 2 hours and enabling 6 team members to independently perform integration testing.
- Optimized GPU scheduling and resource allocation within a multi-service UCS application via customized Helm configurations, achieving efficient utilization and reliable performance on a single GPU.
- Deployed containerized Riva Text-to-Speech by customizing Helm charts on Kubernetes, reducing API expenses to zero.
- Enhanced AI avatar animation by aligning audio-to-face outputs and setting up experimental environments for the UX design team, improving collaboration efficiency, lip-sync realism, and overall user experience.
- Produced real-time monitoring dashboards with Grafana and Prometheus integration to track CPU/GPU utilization and network bandwidth/latency, ensuring stable performance in live exhibitions.
- Generated automated radiology reports by running inference with VLMs (Opus-4, GPT-4o, MedGemma) hosted on AWS Bedrock and Azure OpenAI using 2D DICOM X-ray and mammography images. Evaluated reports with a RAG-as-a-Judge framework, providing insights for large-scale fine-tuning on 76 TiB of internal medical data.

Human Language Technology Research Institute August 2022 – May 2025
NLP Research Assistant (Advisor: Dr. Vincent Ng) Richardson, TX

- Led creation of the first unified computational meme understanding dataset with a novel annotation pipeline, demonstrating its effectiveness by fine-tuning sequence-to-sequence models and VLMs, achieving state-of-the-art performance in interpretation, explanation, and categorization reasoning tasks.
- Introduced an intent description generation task with background knowledge integration, boosting LLM/VLM meme interpretation performance by 43% through in-context learning.
- Proposed active learning approach for hate speech detection, addressing topic dependency while reducing annotation cost by 90% and surpassing SOTA models.
- Mentored 4 high school juniors on ML (CLIP/BLIP, OpenCV), resulting in co-authorship of research paper.
- Guided 5 undergrads in NSF REU program, supporting projects on LLMs, CNN/LSTM, TFR-BERT, and SVM.
- Designed ML project (Intro to ML. Honors), covering data augmentation and Question-Answering tasks.

Selected Activities & Honors

Conference Reviewer AAAI 2026, ICASSP 2025 2025-2026
Branch Manager & Math Tutor IntelliChoice (Volunteer) 2022-2024
National Science & Engineering Scholar Korea Student Aid Foundation (Full-merit) 2018-2023
Drill Assistant Instructor 28th Basic Training Center, ROK Army (Excellence) 2019-2021
International Student Creativity Challenge ICAST (Excellence, Fintech Platform) 2018
Startup Project Contest KNU (2nd, Autonomous Lifeboat) 2018
SkillUp Hackathon KNU (1st, Image Detection) 2018