

Chaerin Kong

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EDUCATION	Seoul National University 09/2021 – 08/2023 Master of Science in Machine Learning <i>Outstanding Thesis Award</i> (Thesis: Data Efficient Generative Models)
	Seoul National University 03/2015 – 08/2021 Bachelor of Science in Statistics and Business Administration, <i>Summa cum laude</i>
WORK EXPERIENCE	Twelve Labs 09/2024 – Present ML Research Scientist <ul style="list-style-type: none">Led large-scale distributed training of video-language models (8B–70B) with 100+ GPUsImplemented 4D parallelism for custom architecture VLM based on Nvidia NeMo frameworkDesigned, implemented and evaluated video-RAG agentic system that handles question-answering on video corpus with 100+ hours of videosCreated evaluation benchmark for video agents and curated dataset for agentic finetuningTech Stack: PyTorch, Docker, Transformers, NeMo, FastAPI, AWS SageMaker, OCI, MCLI
	NXN Labs 01/2024 – 08/2024 AI Research Scientist <ul style="list-style-type: none">Adapted diffusion foundation models for Virtual Try-On by introducing domain-specific data augmentations and adversarial training to improve precisionBuilt semi-automated pipeline to collect and filter [clothing-person-GT] triplets from the webDesigned evaluation metrics for ViTON quality assessment that align with human perceptionTech Stack: PyTorch, Docker, Diffusers, MMPose, MS Azure
	Asleep 09/2023 – 01/2024 AI Research Scientist <ul style="list-style-type: none">Enhanced audio-based sleep stage prediction accuracy by leveraging 10M+ unlabeled data for contrastive learning with real world noise augmentationPrototyped perceived sleep quality prediction model and sleep embedding model using sparsely annotated dataTech Stack: PyTorch, Transformers, TIMM, Librosa, Scikit-Learn, SQL, Pandas
	NAVER 04/2022 – 09/2022 Research Intern <ul style="list-style-type: none">Designed and experimented large-scale modality-agnostic vision-language pretraining for document understanding and presented the findings orally at AAAI 2023 as the main authorDevised and implemented an image editing algorithm using classifier-guided diffusion for commerce applications and documented the result for WACV 2023 as the main authorTech Stack: Kubernetes, Hadoop, Docker, PyTorch, Transformers
	SELECTED PUBLICATIONS
[1] Few-shot Image Generation with Mixup-based Distance Learning C. Kong , J. Kim, D. Han, N. Kwak (ECCV 2022)	
[2] Unifying Vision-Language Representation Space with Single-tower Transformer J. Jang*, C. Kong* , D. Jeon, S. Kim, N. Kwak (AAAI 2023 Oral, *equal contributions)	
[3] Leveraging Off-the-shelf Diffusion Model for Multi-attribute Fashion Image Manipulation C. Kong , D. Jeon, O. Kwon, N. Kwak (WACV 2023)	
[4] Analyzing Multimodal Objectives through the Lens of Generative Diffusion Guidance C. Kong , N. Kwak (ICLR 2023 Workshop)	
[5] AADiff: Audio-Aligned Video Synthesis with Text-to-Image Diffusion S. Lee, C. Kong , D. Jeon, N. Kwak (CVPR 2023 Workshop)	