



JUNYOUNG KOH Deep Learning Engineer | AI Researcher

Email : arsol970812@gmail.com / Phone : +82 10 9921 6066 / Nationality : South Korea

Summary |

- **Generative AI & Multimodal Research:** Researched generative AI and multimodal learning, developing Stable Diffusion-based models and personalized LoRA. Built prompt pipelines and optimized image generation.
- **Full-stack AI Development:** Managed full pipeline from data collection to model training and publication. Bridged research and deployment with cross-functional expertise.
- **Language Skill :** English(Fluent), Korean(Native), Japanese(Intermediate)

Career Path

- **KRAFTON, Seoul, South Korea**

2025.08 ~ Current Deep Learning Div. / Ph.D. Intern
[Key Responsibilities]
 - Developing Game Asset Image Generation Model
- **Onoma AI, Seoul, South Korea**

2024.01 ~ 2025.02 AI Team / Lead
2023.09 ~ 2023.12 AI Team / Image Part Lead
2023.07 ~ 2023.08 AI Team / Image Part Researcher
[Key Responsibilities]
Developed SDXL-based generative illustration foundation model.
Built and augmented 20M+ illustration image dataset.
Planned CES 2024 & 2025 AI award-winning AI models.
Developed LoRA adapter models for unstructured image domains.
Designed prompt pipelines for robust text-image alignment.
Built automated character/story generation tools using GPT-4.
Led publications and workshops based on research outcomes.

[Achievements]
 - Illustrious: SDXL-based illustration generator; released via HuggingFace, TensorArt, with MOUs. Collected 20M+ illustrations from Common Crawl; public model releases.
 - TooToon Emporium: Character model marketplace with LoRA + VSA Tagger. Built AWS/SageMaker/Docker pipeline; partnered with 20+ companies incl. LG U+, Kenaz. Created 40+ character LoRA models used in webtoon/Instagram.
 - TooToon Artifex: Line art generator with ControlNet/inpainting (ComfyUI/WebUI); Used by 50+ artists for webtoon production.
 - TooToon Fabulator: LLM-based tool for auto synopsis/treatment/character sheets. Integrated chracter sheet → LoRA training pipeline.

Education

- Yonsei University, South Korea
Integrated Master's and Ph.D. Student in Artificial Intelligence
2023.03 ~ Current
- University of Southern California, USA
AI/Machine Learning Summer Session
2025.07 ~ 2025.08
- Soongsil University, South Korea
Bachelor of Engineering in Global Media
2017.03 ~ 2023.02
- Seoul High School, South Korea
2013.03 ~ 2016.02

Paper / Project

- **Yonsei University, Seoul**

2023.09 ~ 2024.06 CAT : Contrastive Adapter Training for Personalized Image Generation (CVPR Workshop)
 - Proposed Contrastive Adapter Training (CAT) to address object diversity loss and prior knowledge collapse in LoRA-based diffusion models
 - Designed CAT loss to preserve base model knowledge during adapter application
 - Introduced Knowledge Preservation Score (KPS) for performance evaluation
- **2024.06 ~ 2024.07 Improving Text Generation on Images with Synthetic Captions (IIAI-AAI 2024)**
 - Proposed a lightweight fine-tuning strategy to address blurry or inaccurate text generation in SDXL-based text-to-image models
 - Applied a cost-efficient training method using refined datasets and synthetic captions, without relying on large multimodal encoders
 - Improved text rendering accuracy through data augmentation with randomized character inclusion
- **2024.08 ~ 2025.02 Illustrious: an Open Advanced Illustration Model (Technical Report)**
 - Developed Illustrious, a text-to-image model specialized in animation-style image generation
 - Proposed strategies to enhance high-resolution generation quality through large-batch training, high-res finetuning, and multi-level caption refinement
 - Achieved SOTA performance in the illustration domain with plans for continued improvement and open-source customization
- **2025.03 ~ 2025.07 Let Triggers Control : Frequency-aware Dropout for Effective Token Control (AAAI Review)**
 - Applying flexible dropout to trigger tokens allows retaining existing knowledge while effectively generating the target image
- **2025.05 ~ 2025.08 Jamendo-QA: A Large-Scale Music Question Answering Dataset (NeurIPS AI4Music Workshop Review)**
AIBA :Attention-based Instrument BandAlignment for Text-to-Audio Diffusion (NeurIPS AI4Music Workshop Review)
 - Extraction of Frequency Instrument Band Alignment via Cross-Attention
 - Release of the Jamendo QA Dataset
- **(Ongoing) Multi-Pitch Estimation Model Based on Synthetic Polyphonic Vocal Data**
 - Development of a Multi-Pitch Estimation Model Based on Polyphonic Vocal
 - Synthesis Data
 - National Research Foundation of Korea Ph.D Research Fellowship Program funding KRW 25,000,000 (20,000USD) per year

Awards

- CES 2024 Innovation Award in AI Category
- CES 2025 Innovation Award in AI Category