Seung Hyun (Sally) Hahm

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Skills

- **Machine Learning & AI**: Deep Learning, Multimodal LLM, LLVM, Generative AI, Video Understanding
- **Software & Tools**: PyTorch, Huggingface, NumPy, Pandas, Matplotlib, Git, Linux
- **Programming Languages**: Python, C, JavaScript, Java, Solidity
- **Project Management**: JIRA, Confluence

Education

- **Dartmouth College** — Hanover, NH
  B.A. in Computer Science and Neuroscience — *Expected 06/2025*
  Awards: Academic Award for Deep Learning and Multi-modalities Generative AI courses
  Relevant Courses: Deep Learning, Multi-modalities Gen AI, Machine Learning, Computer Vision, Computer Architecture

Research Experience

- **Dartmouth College** — Hanover, NH
  *AI Researcher - **Machine Perception: Dynamic Adaptive Motion Planning from Videos*** — *01/2025 – Present, Ongoing*
  - **Diffusion Model**: Generating synthetic video datasets using video diffusion model to train AI models to predict sequential actions from movement and interaction cues in rehabilitative scenarios.
  - **Motion Planning**: Using egocentric video datasets to train models to learn low-level procedural tasks and generalize to higher contextual decision-making to enhance motion planning capabilities in embodied AI.

  *AI Researcher - **Capturing Dynamic Character Relationships for Audio Descriptions*** — *09/2024 – Present, Ongoing*
  - **Planned Submission**: ICCV, 2025
  - **Dataset Pipeline**: Generated synthetic video datasets using diffusion models to address dataset bottlenecks in movies.
  - **Video Understanding**: Constructing cross-attention-driven character relationship maps to dynamically guide video captioning models in adapting to long-range relational changes, enhancing automated audio descriptions for visually impaired users.
- **Yonsei University** — Seoul, Korea
  *AI Researcher Intern - **3D Human Motion Stylization*** — *01/2024 – 11/2024*
  - **Model Pipeline**: Developed a text-guided motion stylization pipeline integrating VQ-VAE and CLIP. Generated 3D motions that can capture subtle semantic differentiation (e.g., "stroll" vs. "walk fast").
  - **Data Processing**: Addressed the scarcity of diverse 3D human motion datasets by using language models to generate synthetic SMPL-based data, then processed these datasets to enable robust model training and evaluation.

Projects

- **Dartmouth College** — Hanover, NH
  InstructBLIP Video Captioning Optimization - *Term Project for Multi-modal Gen AI Course* — *09/2024 – 12/2024*
  - **Model Optimization**: Fine-tuned InstructBLIP's Q-Former for vision-language modeling with MSR-VTT dataset. Improved video comprehension and achieved +24 CIDEr score, ranking 2nd on the MSR-VTT leaderboard with just 6K video-text pairs.

Industry Experience

- **NextCare** — Singapore, Singapore
  Founding Member, Project Leader — *01/2022 – 06/2024*
  - **Technical Framework & Business Development**: Led the design and development of a blockchain-based health data exchange, integrating Self-Sovereign Identity (SSI) for secure, user-controlled data management. Defined the business model, go-to-market strategy, and technical framework while delivering key milestones and ensuring stakeholder alignment.
  - **Whitepaper & Investment Strategy**: Led the development of whitepaper and ICO initiatives with a three-person team and secured investments from JD.com and Presto Labs.
- **dKargo** — Seoul, Korea
  Blockchain Developer, Tech Project Leader — *08/2021 – 06/2024*
  - **Team Management**: Led a 20-member team across engineering, product, and business to launch a blockchain mainnet.
  - **Software Development**: Led the end-to-end development of the blockchain mainnet's technical architecture, enabling decentralized logistics data storage and sharing.
- **2Digits** — Gyeonggido, Korea
  AI Engineer Intern — *05/2021 – 08/2021*
  - **NLP: Data Pre-Processing**: Assisted in preprocessing financial news data for a stock price prediction model using Ko-BERT.
  - **Model Evaluation**: Verified prediction outputs, identifying and addressing discrepancies to improve model reliability.

Patents

Bathroom Tiles for the Visually Impaired — KR Patent No. 10-1667474
Clothing Storage Device for the Visually Impaired — KR Patent No. 10-1443535