Liza Dahiya

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Education

MSR, Carnegie Mellon University   *Aug '25 - May '27 (expected)*
- M.S. in Robotics, **Advisors:** Laszlo A. Jeni, Max Simchowitz   *CPI: 4.13/4.0*
- **Key Courses:** Advanced Computer Vision, Intro to Robot Learning, Embodied AI Safety, Flow Matching & Diffusion
- **Teaching Assistant:** 16-835 Computer Vision (Spring 2026)

Indian Institute of Technology, Bombay   *July '19 - May '23*
- Bachelors in Technology in Computer Science & Engineering with **Honors** in Machine Learning   *CPI: 8.48/10*
- **Key Courses:** Foundations of Learning Agents, Medical Imaging, AI & Machine Learning, Information Retrieval

Publications & Patents

FPSBench: A Benchmark for Video Understanding at High Frame Rates   *CVPR '26*
R. Choudhury, J.S. Dandurand, K. Qiu, K. M. Bhat, K. Sharma, L. Dahiya, Y. Zhao, S. Kundu, C. Lin, K. Kitani, L. A. Jeni

MAD-HOI: Masked Autoregressive Diffusion for Generating HOI from Text   *ECCV '26 (review)*
A. Bal, K. Sharma, E. Lai, S. Tiwari, L. Dahiya, C. Chawala, L. A. Jeni

ANCHOR: Audio-Visually Grounded Chain-of-Thought Reasoning Benchmark   *ECCV '26 (review)*
J. Julin, S. Kundu, L. Dahiya, G. Z. Wei, L. Xie, J. Yi, Xu.Zhang, H. Yang, L. A. Jeni

Visual Loop Closure Detection Through Deep Graph Consensus   *IROS '25*
M. Büchner, L. Dahiya, S. Dorer, V. V. Ramtekkar, K. Nishimiya, D. Cattaneo[1], A. Valada

Robust Depth-Aided Segmentation for Drivable Region in Challenging Environments   *ICRA W '24*
V. V. Ramtekkar, L. Dahiya N. Shah, K. Nishimiya, T. Kuroki, C. Song, A. Kim, M. Jeon

LiveStreaming AI: Merchandisable Moment Identification and Offer Generation   *US Patent @ Adobe*
S. Choudhary, A. R. Sinha, S. Chakraborty, S. S. Kalakonda, L. Dahiya, P. Grover, K. Jain

Professional Experience

Honda RnD, Japan | *AI Researcher*   *Oct '23 - Aug '25*
- Developed a depth-aided **Vision Transformer** based perception module for domain adaptive scene understanding
- Innovated a **GNN**-based loop closure technique with multi-keyframe clique consensus, improving MR by 80%, AP by 10%
- Applied **ControlNet**-based data augmentation within **real2sim2real** pipelines, improving robustness in off-road scenes
- Experimented with **Gaussian-Splatting-based SLAM** representations for handling dynamic off-road environments

Adobe Research, India | *ML Research Intern*   *May '22 - July '22*
- Real-time prediction of merchandisable moments in livestream using **multi-modal** data & user response, with AUC **0.87**
- Employed a flag-raiser model for **low latency** edge devices using chat statistical information achieving **71%** accuracy
- Constructed **attention-based** video summarizer, STFT-peak audio detector, chat linear regressor, fused using **LSTMs**

Key Technical Skills

Programming	Python, C++/C, MATLAB, JavaScript, Git, Docker, SQL
ML / DL	PyTorch, TensorFlow, TensorRT, JAX; Vision Transformers, GNNs, Diffusion Models, VLAs

Research Labs

CUBE Lab, CMU | *Prof. Laszlo Jeni*   *Ongoing*
- Understanding spatial, temporal, grounded and **Chain-of-Thought** Reasoning for sequential tasks in Multimodal LLMs

Max Lab, CMU | *Prof. Max Simchowitz*   *Ongoing*
- Developing semantic **intermediate** representations to enable reasoning-aware VLAs for long-horizon manipulation tasks

IITB Trust Lab, IIT Bombay | *Prof. Abir De*   *July '22 - April '23*
- Developed **Message Passing NN** to model reactants, products, & enzymes for predicting yield, reducing **MAE** by 10%
- Implemented a **Transformer** and **LSTM**-based architecture to capture the complete reaction sequence based mechanism

SenticNet, Nanyang Technological University | *Prof. Erik Cambria*   *Aug '23 - Aug '25*
- Analyzing cognitive patterns in aging cognitive diseases like dementia using a computational metaphor processing tool
- Collected & analyzed large social media data to uncover themes and provide insights into individuals with dementia

Leadership & Outreach

Co-Founder | *FeMeal* - Empowered 2000+ women with PCOS using tech & wellness, awarded 50k by IDEAS   *2020-21*

Evangelist | *Women Who Code, Mumbai* - Organized events with 30+ members to support women in tech   *2021-23*

Chief Editor | *Bitstream* - Led team of 15 to create a newsletter on academic, research, & student activities   *2021-22*