




Kumar Ashutosh

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🌐 <https://ashutoshkr.me>

Education

- 2021 – Present  **The University of Texas at Austin** Austin, TX
Ph.D. Computer Science
Advisor: Kristen Grauman
Research area: Computer Vision, Machine Learning
- 2016 – 2021  **Indian Institute of Technology Bombay** Mumbai, India
Master's in Electrical Engineering
Thesis title: *3D Shape Reconstruction with View-Planning*.
-  **Indian Institute of Technology Bombay**
Bachelor's in Electrical Engineering, Minor in Computer Science

Work Experience





- Present  **Meta AI**, Visiting Researcher Austin, TX
 **UT Austin**, Graduate Research Assistant Austin, TX
- Summer 2022  **Meta AI**, Research Intern New York, NY
- Winter 2019  **360World**, AR/VR Developer Intern Budapest, Hungary
- Summer 2019  **Sony Corporation**, Research Engineer Intern Kanagawa, Japan
- Summer 2018  **National University of Singapore**, Research Intern Singapore
 **Google Summer of Code**, Developer Remote

Research Publications

Preprints

- 1 **K. Ashutosh**, R. Girdhar, L. Torresani, and K. Grauman, "What you say is what you show: Visual narration detection in instructional videos," 2023. arXiv: 2301.02307 [cs.CV].

Conference Proceedings

- 1 **K. Ashutosh**, Z. Xue, T. Nagarajan, and K. Grauman, "Detours for Navigating Instructional Videos," in *Proceedings of the IEEE/CVF Conference on Computer Vision and Pattern Recognition (CVPR)*, Jun. 2024, .
- 2 C. Chen, **K. Ashutosh**, R. Girdhar, D. Harwath, and K. Grauman, "Discovering sounding actions in video with multimodal consensus," in *Proceedings of the IEEE/CVF Conference on Computer Vision and Pattern Recognition (CVPR)*, Jun. 2024.
- 3 K. Grauman, A. Westbury, L. Torresani, *et al.*, "Ego-exo4d: Understanding skilled human activity from first- and third-person perspectives," in *Proceedings of the IEEE/CVF Conference on Computer Vision and Pattern Recognition (CVPR)*, Jun. 2024, .
- 4 Z. Xue, **K. Ashutosh**, and K. Grauman, "Learning object state changes in videos: An open-world perspective," in *Proceedings of the IEEE/CVF Conference on Computer Vision and Pattern Recognition (CVPR)*, Jun. 2024, .
- 5 **K. Ashutosh**, R. Girdhar, L. Torresani, and K. Grauman, "HierVL: Learning Hierarchical Video-Language Embeddings," in *Proceedings of the IEEE/CVF Conference on Computer Vision and Pattern Recognition (CVPR)*, Jun. 2023, **Highlight paper (Top 2.5%)** .

- 6 **K. Ashutosh**, S. Ramakrishnan, T. Afouras, and K. Grauman, "Video-mined task graphs for keystone recognition in instructional videos," in *Advances in Neural Information Processing Systems (NeurIPS)*, 2023, [🔗](#).
- 7 **K. Ashutosh**, S. Kumar, and S. Chaudhuri, "3D-NVS: A 3D Supervision Approach for Next View Selection," in *2022 26th International Conference on Pattern Recognition (ICPR)*, 2022, [🔗](#).
- 8 A. Jaiswal, **K. Ashutosh**, J. F. Rousseau, Y. Peng, Z. Wang, and Y. Ding, "RoS-KD: A Robust Stochastic Knowledge Distillation Approach for Noisy Medical Imaging," in *2022 IEEE International Conference on Data Mining (ICDM)*, 2022, [🔗](#).
- 9 **K. Ashutosh**, J. Nair, A. Kagracha, and K. Jagannathan, "Bandit algorithms: Letting go of logarithmic regret for statistical robustness," in *Proceedings of The 24th International Conference on Artificial Intelligence and Statistics (AISTATS)*, 2021, **Oral presentation (Top 3%)** [🔗](#).
- 10 **K. Ashutosh**, "Hardware performance analysis of mobile-based augmented reality systems," in *2020 International Conference on Computational Performance Evaluation (ComPE)*, 2020, [🔗](#).
- 11 **K. Ashutosh**, S. Consul, B. Dedhia, P. Khirwadkar, S. Shah, and S. Kalyanakrishnan, "Lower bounds for policy iteration on multi-action mdps," in *2020 59th IEEE Conference on Decision and Control (CDC)*, 2020, [🔗](#).
- 12 R. Bose, **K. Ashutosh**, J. Li, A. Dragomir, N. Thakor, and A. Bezerianos, "A multilayer network approach for studying creative ideation from eeg," in *Brain Informatics*, Springer International Publishing, 2018, [🔗](#).

Professional Service

Reviewer

- 2024, 2022 [📌](#) The IEEE/CVF Winter Conference on Applications of Computer Vision (WACV)
- 2023 [📌](#) The IEEE/CVF International Conference on Computer Vision (ICCV)
- 2023, 2024 [📌](#) The IEEE/CVF Conference on Computer Vision and Pattern Recognition (CVPR)
- 2022,2024 [📌](#) European Conference on Computer Vision (ECCV)

Teaching Assistant

- Spring 2021 [📌](#) *Matrix Computations* in Electrical Engineering, IIT Bombay
- Autumn 2020 [📌](#) *Applied Linear Algebra* in Electrical Engineering, IIT Bombay









Responsibilities

- 2019 – 2020 [📌](#) Department Academic Mentor Coordinator in Electrical Engineering, IIT Bombay
- 2018 – 2021 [📌](#) Institute and Department Academic Mentor, IIT Bombay
- 2017 – 2018 [📌](#) Convener of *Web n Coding Club*, IIT Bombay







Open Source

- 2023 [📌](#) Contributed to PyTorch codebase [🔗](#)
- [📌](#) Open sourced the implementation of our CVPR 2023 paper (HierVL): [🔗](#)
- 2017 [📌](#) Contributed 2k+ lines of code to scikit-learn, a popular ML package [🔗](#)








Awards and Achievements

- 2023  Professional Development Award by UT Austin to attend NeurIPS 2023
- 2023  Professional Development Award by UT Austin to attend CVPR 2023
- 2020  Department Color by IIT Bombay for valuable contribution to the mentorship program
- 2017  Invited to the Republic Day Parade as a guest of the Hon'ble Prime Minister of India
- 2016  Rashtrapati Puraskar (President's Award) by the Hon'ble President of India for Scouting
- 2016  99.97 (out of 1.2M) and 99.14 percentile (out of 0.15M) in JEE Mains and Advanced
- 2015  Qualified Indian National Mathematical Olympiad and attended selection camp for IMO
- 2015  Cleared NTSE and KVPY scholarship exams organized by the Govt. of India




Press Coverage

- 2023  Meta AI's coverage of our CVPR 2023 paper : , , , 




Talks

- 2023  Invited talk at IIT Delhi in Jan titled "Long-video understanding with text supervision".
- 2023  Highlight presentation of our paper at CVPR 2023 
- 2023  Invited talk at International Workshop on Large Scale Holistic Video Understanding, CVPR 2023
- 2021  Oral presentation of our work at AISTATS 2021 
- 2020  Invited Talk on Augmented Reality Applications at Electronics and Robotics Club, IIT Bombay

Technical Skills

- Languages  Python, C++, C, HTML, CSS, \LaTeX
- ML Tools  Huggingface, Deepspeed, Fairseq, SLURM, PyTorch, Tensorflow, Git
- Development  React, Jekyll, Android Studio, Xcode, Unity

Extracurricular activities

- Sports  Football (Soccer), Squash, Cricket, Tennis, Badminton
- Activities  Hiking, Running
- Music  Guitar, Piano/Keyboard