Ram Ramrakhya

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ram81.github.io

Education

Georgia Institute of Technology, Atlanta, GA
Ph.D. in Computer Science — Aug 2023 - Present
Advised by Dhruv Batra and Zsolt Kira — (Expected May 2027)

Georgia Institute of Technology, Atlanta, GA
M.S. in Computer Science — Aug 2021 - May 2023
Advised by Dhruv Batra and Abhishek Das

Pune Institute of Computer Technology, Pune, India — Aug 2015 - May 2018
Bachelor of Engineering in Information Technology

Internships

Apple, New York, NY — Jan 2025 - Aug 2025
Research Intern with Alex Toshev and Harsh Agrawal
Built a scalable synthetic data generation pipeline to enable SFT and RL training using multi-modal LLM verifiers for computer use agents (mobile, desktop, and web).

FAIR, Meta, Seattle, WA — May 2024 - Aug 2024
Research Intern with Roozbeh Mottaghi
Worked on training vision-language-action agents using reinforcement learning on synthetic rewards to collaborate and chat with humans to complete household tasks.

Allen Institute of AI (AI2), Seattle, WA — May 2023 - Aug 2023
Research Intern with Luca Weihs, Kuo-Hao Zeng, and Aniruddha Kembhavi
Built methods for tidying robots that can reason about object placement based on visual-context and common-sense reasoning in indoor environments.

Mitsubishi Electric and Research Laboratories, Boston, MA — May 2022 - Aug 2022
Resarch Intern with Anoop Cherian
Worked on indoor semantic navigation using scene graph representations for end-to-end learning.

Machine Learning and Perception Lab, GT, Atlanta, GA — April 2020 - July 2021
Research Intern with Dhruv Batra, and Abhishek Das
Built Habitat-Web, infrastructure to collect human demonstrations for embodied tasks at scale.
Used it to scale training of indoor semantic navigation agents using IL and RL finetuning.

Awards

ICLR Notable Reviewer Award — 2025
Georgia Tech Rising Star Doctoral Student Research Award (2 student from the College) — 2023
Georgia Tech CoC Outstanding MS Researcher (1 student from the College) — 2022
Runner up at Habitat Navigation Challenge — 2021, 2022

Publications

[C13] **Grounding Multimodal LLMs to Embodied Agents that Ask for Help with Reinforcement Learning**
R. Ramrakhya, M. Chang, X. Puig, R. Desai, Z. Kira, R. Mottaghi
Under Review

[C12] **PARTNR: A Benchmark for Planning and Reasoning in Embodied Multi-agent Tasks**
M. Chang, G. Chhablani, A. Clegg, M. Cote, R. Desai, M. Hlavac, V. Karashchuk, J. Krantz
R. Mottaghi, P. Parashar, S. Patki, I. Prasad, X. Puig, A. Rai, R. Ramrakhya, D. Tran, **J. Truong**
J. Turner, E. Undersander, T. Yang
International Conference on Learning Representations (ICLR), 2025

[C11] **HM3D-OVON: A Dataset and Benchmark for Open-Vocabulary Object Goal Navigation**
N. Yokoyama*, **R. Ramrakhya***, A. Das, D. Batra, S. Ha
IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS), 2024

[C10] **ReLIC: A recipe for 64k steps In-Context Reinforcement Learning for Embodied AI**
A. Elawady, G. Chhablani, **R. Ramrakhya**, K. Yadav, D. Batra, Z. Kira, A. Szot
Under Review

[C9] **Seeing the Unseen: Visual Common Sense for Semantic Placement**
R. Ramrakhya, A. Kembhavi, D. Batra, Z. Kira, K. Zeng*, L. Weihs*
IEEE Computer Vision and Patter Recognition (CVPR), 2024

[C8] **GOAT-Bench: A Benchmark for Multi-Modal Lifelong Navigation**
M. Khanna*, **R. Ramrakhya***, G. Chhablani, S. Yenamandra, T. Gervet, M. Chang, Z. Kira, D. Chaplot, D. Batra, R. Mottaghi
IEEE Computer Vision and Patter Recognition (CVPR), 2024

[C7] **PIRLNav: Pretraining with Imitation and RL Finetuning for ObjectNav**
R. Ramrakhya, D. Batra, E. Wijmans, A. Das
IEEE Computer Vision and Patter Recognition (CVPR), 2023

[C6] **OVRL-v2: Semantic Navigation without Semantic Mapping or Detection**
K. Yadav*, A. Majumdar*, **R. Ramrakhya**, A. Baevski, Z. Kira, O. Makysmets, D. Batra
arXiv preprint arXiv:2303.07798, 2023

[C5] **Curriculum Learning via Task Selection for Embodied Navigation**
R. Ramrakhya, D. Batra, A. Kembhavi, L. Weihs
Embodied AI Workshop, CVPR 2023, 2023

[C4] **Offline Visual Representation Learning for Embodied Navigation**
K. Yadav, **R. Ramrakhya**, A. Majumdar, V. Berges, S. Kuhar, D. Batra, A. Baevski, O. Makysmets
Reincarnating Reinforcement Learning Workshop, ICLR 2023

[C3] **Habitat-Matterport 3D Semantics Dataset**
K. Yadav*, **R, Ramrakhya***, S. Ramakrishnan*, T. Gervet, J. Turner, A. Gokaslan, N. Maestre, A. Chang, D. Batra, M. Savva, A. Clegg, D. Chaplot
IEEE Computer Vision and Patter Recognition (CVPR), 2023

[C2] **Habitat-Web: Learning Embodied Object-Search Strategies from Human Demonstrations at Scale**
R. Ramrakhya, E. Undersander, D. Batra, A. Das
IEEE Computer Vision and Patter Recognition (CVPR), 2022

[C1] **Fabrik: An Online Collaborative Neural Network Editor**
U. Garg, V. Prabhu, D. Yadav, **R. Ramrakhya**, H. Agarwal, D. Batra
Systems for ML Workshop 2019

Invited Talks

Habitat-Web: Embodied Object-Search Strategies from Human Demonstrats at Scale
Overlooked Aspects of IL Workshop at RSS June 2022

Seeing the Unseen: Visual Common Sense for Semantic Placement
University of Washington RAVIN AI/ML Seminar Jan 2024

Work Experience

Glance, Bangalore, KA — Jun 2018 - Jul 2021

Software Development Engineer 2

- Built a content creation platform from scratch, built content extraction from web using heuristic based crawlers, and used image captioning models to automated content filtering at scale. The tool helps streamline creation of $\sim$**10,000** glance stories and saves $\sim$**150** hours of manual effort by each content designer monthly.
- Worked on optimizing large-scale data pipelines and content serving infrastructure, that serves **150** million users and ingests 10TB data every day to save $\sim$**20k**$ in monthly infrastructure cost.

CloudCV, Atlanta, GA — Jan 2021 - Jul 2022

Open Source Organization Lead

- Led a team of **15**+ collaborators to work on EvalAI, an open-source platform to create and participate in AI challenges. Collaborated closely with **30**+ organizations including Meta, Google, Amazon, etc to host **200**+ AI challenges for top tier AI conferences.

Open Source Projects

Eval.AI [github.com/Cloud-CV/EvalAI] — 2020-2022

- Platform to create, collaborate and participate in the AI Challenges organized around the globe.

Fabrik [github.com/Cloud-CV/Fabrik] — 2018-2020

- Collaborative platform to build, visualize and train deep learning models via a simple drag-and-drop interface.

Professional

Workshop Organization

5^{th} EmbodiedAI Workshop at CVPR	2024
Vision and Language Algorithmic Reasoning Workshop at ICCV	2023

Challenge Organization

HomeRobot: Open Vocabulary Mobile Manipulation (OVMM) Challenge at NeurIPS	2023
Habitat Navigation Challenge 2023 at Embodied AI Workshop, CVPR	2023
Habitat Navigation Challenge 2023 at Embodied AI Workshop, CVPR	2022

Reviewing

International Conference on Machine Learning (ICML)	2024
International Conference on Learning Representations (ICLR)	2023, 2025
Neural Information Processing Systems (NeurIPS)	2023, 2024
IEEE Robotics and Automation Letters (RA-L)	2023

Advising

Gunjan Chhablani (MS Georgia Tech $\rightarrow$ Waymo); Publication [C4]	2023
Archana Kutumbaka (MS Georgia Tech $\rightarrow$ Adobe)	2023
Google Summer of Code (7 mentors)	2021
Google Summer of Code (9 undergraduate students)	2019-2021
Google Code-In (15 high-school students)	2018-2019