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

FAIR, Meta, Seattle, WA — May 2024 - Present
Research Intern with Roozbeh Mottaghi
Working on multi-modal foundation models for embodied agents that collaborate with humans.

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

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

[C6] **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

[C5] **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

[C4] **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

[C3] **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

[C2] **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

[C1] **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

WORKSHOP	**[W5] Curriculum Learning via Task Selection for Embodied Navigation** **R. Ramrakhya**, D. Batra, A. Kembhavi, L. Weihs *Embodied AI Workshop, CVPR 2023*
	[W4] PIRLNav: Pretraining with Imitation and RL Finetuning for ObjectNav **R. Ramrakhya**, D. Batra, E. Wijmans, A. Das *Reincarnating Reinforcement Learning Workshop, ICLR 2023*
	[W3] 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*
	[W2] Habitat-Web: Learning Embodied Object-Search Strategies from Human Demonstrations at Scale **R. Ramrakhya**, E. Undersander, D. Batra, A. Das *Embodied AI Workshop (CVPR 2022), Overlooked Aspects of IL Workshop (RSS 2022)*
	[W1] Fabrik: An Online Collaborative Neural Network Editor U. Garg, V. Prabhu, D. Yadav, **R. Ramrakhya**, H. Agarwal, D. Batra *Systems for ML Workshop 2019*

PREPRINT	**[P2] 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 at NeurIPS 2024*
	[P1] 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*

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]** Platform to create, collaborate and participate in the AI Challenges organized around the globe.	2020-2022
	Fabrik [github.com/Cloud-CV/Fabrik] Collaborative platform to build, visualize and train deep learning models via a simple drag-and-drop interface.	2018-2020

PROFESSIONAL	**Workshop Organization**	
	5th 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); Publication [C4]   2023
Archana Kutumbaka (MS Georgia Tech)   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