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- **Georgia Institute of Technology** Atlanta, GA
M.S in Computer Science (Specialization: Machine Learning) | GPA - 4.0 Aug. 2021 – Present (Expected - May, 2023)
Thesis Advisor: [Prof. Dhruv Batra](#)
 - **Pune Institute of Computer Technology** Pune, India
Bachelor of Engineering (Hons.) in Computer Science Aug. 2015 – June. 2018

AWARDS AND ACHIEVEMENTS

- Runner up, Habitat ObjectNav Challenge'22 organized at Embodied AI workshop CVPR'22
- Awarded CoC Outstanding MS Research Award 2022 at Georgia Tech
- Runner up, Habitat ObjectNav Challenge'21 organized at Embodied AI workshop CVPR'21
- University Rank 1 in 3rd Academic Year, University of Pune

EXPERIENCE

- **Mitsubishi Electric and Research Laboratories** Boston, MA
Research Scientist Intern May 2022 - Aug 2022
 - Worked on using 3D scene graphs for building Embodied AI agents to solve complex tasks like navigation and rearrangement.
- **Georgia Institute of Technology** Atlanta, GA
Graduate Researcher advised by [Prof. Dhruv Batra](#) Aug 2021 - Present
 - Working on building embodied agents that learn to navigate and interact with the world by leveraging large-scale human demonstrations.
 - Published 1 research paper in EmbodiedAI at CVPR 2022 and submitted 2 papers at top tier conferences.
- **Machine Learning and Perception Lab, Georgia Tech** Remote
Research Intern advised by [Prof. Dhruv Batra](#) Apr 2020 - Aug 2021
 - Worked on building Habitat-Web, a web-based infrastructure to connect Habitat simulator to Amazon Mechanical Turk which enables collecting human demonstrations for embodied tasks at large scale.
- **Glance** Bangalore, India
Software Development Engineer-2 June 2018 - Aug 2021
 - **Vangogher**: 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 ~10,000 glance stories and saves ~150 hours of manual effort by each content designer monthly.
 - **Cost Optimization**: Worked on optimizing large-scale data pipelines and content serving infrastructure, that serves 150 million users and ingests 10TB data every day to save ~20k\$ in monthly infrastructure cost.
- **CloudCV** Atlanta, GA
Open Source Organization Lead Jan 2021 - Present
 - **EvalAI**: 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.

PUBLICATIONS

- **Habitat-Matterport 3D Semantics Dataset**
Under Review [Paper link](#)
 - Proposed Habitat-Matterport 3D Semantics (HM3DSEM) dataset - largest dataset of 3D real-world spaces with densely annotated semantics.
 - It consists of 142,646 object instance annotations across 216 3D spaces and 3,100 rooms within those spaces.
 - We demonstrate the policies trained using HM3DSEM dataset for the ObjectNav task perform better or comparable than those trained on prior datasets.

- **Habitat-Web: Learning Embodied Object-Search Strategies from Human Demonstrations at Scale**
- **CVPR 2022, Embodied AI Workshop'2022, Overlooked Aspects of IL Workshop at RSS'2022 (Spotlight Talk)** [Paper link](#)
 - Proposed Habitat-Web, a web-based infrastructure to connect Habitat simulator, from Facebook AI Research, to Amazon Mechanical Turk which enables collecting human demonstrations for embodied tasks at large scale.
 - Using Habitat-Web, we collected largest dataset of human demonstrations for ObjectGoal navigation and Pick&Place tasks. Used large-scale imitation learning on this dataset and showed that it improves state-of-the-art by **3.3%**.
- **Offline Visual Representation Learning for Embodied Navigation**
- **Under Review** [Paper link](#)
 - Proposed a 2-stage visual representation learning framework for embodied agents using self-supervised learning.
 - Our approach improves performance over state-of-the-art for ImageGoal and ObjectGoal navigation tasks by **5-25%**.
- **Fabrik: An Online Collaborative Neural Network Editor**
- **AI Systems Workshop, ACM SOSP'19** [Paper link](#)
 - Proposed a open-source collaborative platform to build, visualize and train deep learning models via a simple drag-and-drop interface.

PROJECTS

- **Unsupervised Domain Adaptation:** Used FixMatch and Time consistency objectives to achieve 4% improvement over the state-of-the-art approach for Unsupervised Domain Adaptation from SVHN to MNIST.
- **EvalAI:** Open-source platform to create, collaborate and participate in the AI Challenges organized around the globe; **70+** open source contributors. Hosted **200+** AI challenges appearing at top tier AI conferences from **30+** organizations.
- **Fabrik:** Open-source collaborative platform to build, visualize and train deep learning models via a simple drag-and-drop interface; **30+** open source contributors; **850+** stars; **170+** forks.

EXTRA CURRICULAR ACTIVITIES

- Led a team of 7 mentors and mentored 3 undergraduate students under CloudCV organization for Google Summer of Code 2021.
- Mentored 3 undergraduate students under CloudCV organization for Google Summer of Code 2020.
- Mentored 1 undergraduate student under CloudCV organization for Google Summer of Code'2019.
- Mentored 15 high-school students under CloudCV organization for Google Code-In 2018 and 2019.

PROGRAMMING SKILLS

- **Languages:** Python, C++ , Java
- **Libraries:** Pytorch, TensorFlow
- **Frameworks:** Django, Flask, Java Spring Boot
- **DevOps:** Docker, Kubernetes, Amazon Web Services