ABHAY ZALA

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EDUCATION

MS University of North Carolina at Chapel Hill — May 2022 — Present
Major: Computer Science
Advisor: Professor Mohit Bansal

BS University of North Carolina at Chapel Hill — August 2019 — May 2022
Major: Computer Science

RESEARCH EXPERIENCE

University of North Carolina at Chapel Hill — September 2019 — Present
Advisor: Professor Mohit Bansal

- Vision-Language Navigation, 3D Pose Understanding and Image Captioning, Visual Commonsense Reasoning, Multimodal Text-to-Image Analysis, and Video/Moment Retrieval, Segmentation, and Captioning
- Dataset Generation/Creation, Simulator Development
- Led technical collaborations on dataset creation with Meta AI researchers
- Paper Writing

PUBLICATIONS

* Indicates equal contribution

4. **DALL-Eval: Probing the Reasoning Skills and Social Biases of Text-to-Image Generative Models**
Jaemin Cho, Abhay Zala, Mohit Bansal
In Submission [Preprint]

3. **CoSIm: Commonsense Reasoning for Counterfactual Scene Imagination**
Hyounghun Kim*, Abhay Zala*, Mohit Bansal
Proceedings of NAACL 2022 [pdf]

2. **FixMyPose: Pose Correctional Captioning and Retrieval**
Hyounghun Kim*, Abhay Zala*, Graham Burri, Mohit Bansal
Proceedings of AAAI 2021 [pdf]

1. **ArraMon: A Joint Navigation-Assembly Instruction Interpretation Task in Dynamic Environments**
Hyounghun Kim, Abhay Zala, Graham Burri, Hao Tan, Mohit Bansal
Findings of EMNLP 2020 [pdf]

PRESENTATIONS AND WORKSHOPS

Paper Presentation, "CoSIm: Commonsense Reasoning for Counterfactual Scene Imagination," NAACL, 2022.

Paper Presentation, "FixMyPose: Pose Correctional Captioning and Retrieval," AAAI, 2021.

Workshop, "ArraMon: A Joint Navigation-Assembly Instruction Interpretation Task in Dynamic Environments," SpLU, 2020.

INDUSTRY EXPERIENCE

Capital One June 2022 — August 2022
Machine Learning Intern

ACL Year-Round Mentorship October 2021 — Present
Organizer

HONORS AND AWARDS

Outstanding Undergraduate Researcher Award, Honorable Mention 2021
Computing Research Association (CRA)

SKILLS

Programming: Python, Java, C#, C/C++, Git, PyTorch, JavaScript, OpenGL, Svelte, jQuery, NodeJS, LaTeX, HTML/CSS, PHP, SQL

Applications: Machine Learning, Natural Language Processing, Computer Vision, Dataset Creation, Simulator Development, Website Development, Software Development, Database Management

Platforms: Unity Engine, Amazon Mechanical Turk, Docker, Kubernetes, GitHub, Amazon Web Services, Google Cloud, IBM Cloud, Linux, Windows, MacOS, Google Firebase, Adobe Suite, Autodesk Suite, Microsoft Office Suite, Overleaf

OTHER

- Site Developer/Maintainer of nlp.cs.unc.edu
- Site Developer/Maintainer of perfect-type.com
- Site Maintainer of murgelab.cs.unc.edu
- Developed Social Media Platform for Networking
- Developed Online Peer Tutoring Service with AI assistance
- Developed TV Show and Movie Showcase Website

- Developed VR Healthcare Training System
- Developed AI assistant for Presentations
- ACL Year-Round Mentorship Logo Designer

LANGUAGES

English: Native Language

Spanish: Novice Listener, Speaker, Reading, Writing

Gujrati: Intermediate Listener, Novice Speaker, Reading, Writing

REFERENCES

Mohit Bansal, Associate Professor
University of North Carolina at Chapel Hill

Hyounghun Kim, Assistant Professor
University of Ulsan

Shruti Patel, Senior Machine Learning Engineer
Capital One

Yegór Kryukov, Senior Manager for Solutions NLP services
Capital One

Satwik Kottur, Research Scientist
Meta AI