

Simran Khanuja

PhD in Computer Science | Carnegie Mellon University

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Research Summary

I work on multimodal AI and alignment, with research spanning evaluation, reward modeling, data, interpretability, and image generation. I'm most drawn to problems with the potential for real-world impact, where I can add value to society and people's lives.

Education

- Aug 2022	Carnegie Mellon University PhD in Computer Science (NLP), QPA: 4.03/4.33 Advisor: Prof. Graham Neubig	Pittsburgh, Pennsylvania
Aug 2020 Aug 2015	Birla Institute of Technology and Science, Pilani B.E. (Honors) Computer Science; M.Sc.(Hons.) Economics, CGPA: 8.81/10.00	Goa, India

Experience

Aug 2025 May 2025	Google DeepMind [🔗] Student Researcher, Personalization Team Hosts: Dr. Lun Wang, Dr. John Lambert Project: Steering LLMs for Culturally Localized Generation	MTV, California
Aug 2022 Aug 2020	Google Research [🔗] Pre-Doctoral Researcher Advisors: Dr. Partha Talukdar, Dr. Sebastian Ruder, Dr. Alexis Conneau Projects: MuRIL, MergeDistill, Multilingual NSP for Assistant, FLEURS	Bangalore, India
Jul 2020 Jul 2019	Microsoft Research [🔗] Research Intern (Bachelor Thesis) Advisors: Dr. Sunayana Sitaram, Dr. Monojit Choudhury Projects: Code-Mixed NLU and NLI (GLUECoS), Adapting TULR for Code-Mixing	Bangalore, India

Awards, Fellowships, Grants, Selected Talks

Heidelberg Laureate Forum (HLF) 2026 [\[🔗\]](#) Selected as a Young Researcher among 200 others worldwide
Jane Street Fellowship - Honorable Mention [\[🔗\]](#)
BITS 30 Under 30 - Research Leaders [\[🔗\]](#)
MIT EECS Rising Star 2025 [\[🔗\]](#)
Invited Keynote: CEGIS @ ICCV 2025 [\[🔗\]](#) Evaluating Cultural Diversity in Generative AI
Rising Star in AI, AI for Science Symposium 2025, University of Michigan [\[🔗\]](#)
Imminent Translated Research Grant Recipient, 2025 [\[🔗\]](#) For Human-AI Platform on Image Transcreation
Invited Keynote: DemoDiv @ CVPR 2025 [\[🔗\]](#) Data collection and Evaluation efforts for Image Transcreation
Invited Keynote: AmericasNLP @ NAACL 2024 [\[🔗\]](#) Introducing task and Evaluation efforts for Image Transcreation
Best Paper, EMNLP 2024 [\[🔗\]](#) Introducing the new task of Image Transcreation for localizing multimodal content
CMU Waibel Presidential Fellowship, 2024-25
Best Paper, SLT 2022 [\[🔗\]](#) Introducing the largest multilingual speech-text dataset, FLEURS
National ICSE Topper, 2013 Rank 1 in the country for board examinations

Selected Publications

- [15] **T-DIG: Text-Conditioned Diversity in Image Generation**
[Simran Khanuja](#), Rohit Gandikota, Gaurav Parmar, Graham Neubig
Preprint out soon [Under Submission]

- [14] **Steering LLMs for Culturally Localized Generation** [PDF]
Simran Khanuja, Hongbin Liu, Shujian Zhang, John Lambert, Mingqing Chen, Rajiv Mathews, Lun Wang
Conference on Language Modeling [COLM '26]
- [13] **CAIRE: Cultural Attribution of Images by Retrieval-Augmented Evaluation** [PDF | code]
 Arnav Yayavaram*, Siddharth Yayavaram*, Simran Khanuja*, Michael Saxon, Graham Neubig
European Chapter of the Association for Computational Linguistics (also at CEGIS@ICCV '25) [EACL '26]
- [12] **Grounding Multilingual Multimodal LLMs With Cultural Knowledge** [PDF | code]
 Jean De Dieu Nyandwi, Yueqi Song, Simran Khanuja, Graham Neubig
Conference on Empirical Methods in Natural Language Processing [EMNLP '25]
- [11] **Towards Automatic Evaluation for Image Transcreation** [PDF]
Simran Khanuja*, Vivek Iyer*, Claire He, Graham Neubig
Conference of the Nations of the Americas Chapter of the Association for Computational Linguistics [NAACL '25]
- [10] **Pangea: A Fully Open Multilingual Multimodal LLM for 39 Languages** [web | PDF | code | models]
 Xiang Yue*, Yueqi Song*, Akari Asai, ... Simran Khanuja, ... Graham Neubig
International Conference on Learning Representations [ICLR '25]
- [9] **NaturalBench: Evaluating Vision-Language Models on Natural Adversarial Samples** [PDF]
 Baiqi Li, Zhiqiu Lin, Wenxuan Peng, Jean de Dieu Nyandwi, Daniel Jiang, Zixian Ma, Simran Khanuja, Ranjay Krishna, Graham Neubig, Deva Ramanan
Conference on Neural Information Processing Systems [NeurIPS '24]
- [8] **[Best Paper] An image speaks a thousand words but can everyone listen? On image transcreation for cultural relevance** [web | PDF | code | talk]
Simran Khanuja, Sathyanarayanan Ramamoorthy, Yueqi Song, Graham Neubig
Conference on Empirical Methods in Natural Language Processing [EMNLP '24]
- [7] **[Best Paper Runner-Up] HILITE: Human-in-the-loop Interactive Tool for Image Editing**
 Arya Pasumarthi, Armaan Sharma, ..., Diyi Yang, Graham Neubig, Simran Khanuja
2024 IEEE International Conference on Big Data (Undergraduate Symposium) [IEEE BigData '24]
- [6] **DeMuX: Data-efficient Multilingual Learning** [PDF | code]
Simran Khanuja, Srinivas Gowriraj, Lucio Dery, Graham Neubig
Conference of the North American Chapter of the Association for Computational Linguistics [NAACL '24]
- [5] **Multi-lingual and Multi-cultural Figurative Language Understanding** [PDF | code]
 Anubha Kabra*, Emmy Liu*, Simran Khanuja*, Alham Fikri Aji, ..., Graham Neubig
Annual Conference of the Association for Computational Linguistics [ACL '23 Findings]
- [4] **Evaluating Inclusivity, Equity, and Accessibility of NLP Technology: A Case Study for Indian Languages** [PDF]
Simran Khanuja*, Sebastian Ruder*, Partha Talukdar
European Chapter of the Association for Computational Linguistics [C3NLP | SIGTYP | EACL '23]
- [3] **[Best Paper] FLEURS: Few-Shot Learning Evaluation of Universal Representations of Speech** [PDF]
 Alexis Conneau*, Min Ma*, Simran Khanuja*, Yu Zhang, ..., Ankur Bapna
IEEE Spoken Language Technology Workshop [SLT 2022]
- [2] **MuRIL: Multilingual Representations for Indian Languages** [PDF | large | base]
Simran Khanuja, Diksha Bansal, Sarvesh Mehtani, Savya Khosla, ..., Partha Talukdar
Media: Economic Times | Indian Express | Google AI Blog [Technical Report: Mar '21]
- [1] **MergeDistill: Merging Pre-trained Language Models using Distillation** [PDF]
Simran Khanuja, Melvin Johnson, Partha Talukdar
Annual Conference of the Association for Computational Linguistics (Virtual) [Findings of ACL'21]

Academic Service

Lecturer	CMU-11737 (Multilingual NLP) on Image-Text Modeling for Multilingual NLP (slides)
Workshop Co-organizer	GenAI4World at COLM '26; Visual Persuasion at ECCV '26; MAPS at CVPR '26; Multilingual, Multicultural Evaluation at EACL '25
Reviewer	EMNLP'25, NAACL'25, ACL'25, EMNLP '23, ACL'23, MRL@EMNLP'21, TALLIP'20
Sub-Reviewer	EMNLP'21, EMNLP'20, ACL'20

Volunteer Service

AI For Education In engagement with [Inspiring Teachers](#) to use my research to create educational content for children in Ghana. Also in engagement with [Linguistics Justice League](#) to help localize stories for children for their multilingual story app in 108 languages, using my research.

Talks and Interviews

CEGIS @ ICCV 2025 Keynote: <i>Cultural Inclusivity in Multimodal AI</i> [slides]	Oct 2025
AI for Science Symposium, U. Michigan Rising Star in AI; <i>Research Overview</i> [slides video]	Oct 2025
DemoDiv @ CVPR 2025 Keynote: <i>Image Transcreation for Cultural Diversity</i> [slides video]	Jun 2025
Google Invited talk: <i>Image Transcreation for Cultural Relevance</i> [slides]	Jan 2025
Microsoft Invited talk: <i>Image Transcreation for Cultural Relevance</i> [slides]	Jan 2025
IISc Invited talk: <i>Image Transcreation for Cultural Relevance</i> [slides]	Dec 2024
U. Edinburgh Invited talk: <i>Image Transcreation for Cultural Relevance</i> [slides]	Sep 2024
Pinterest Invited talk: <i>Image Transcreation for Cultural Relevance</i> [slides]	Sep 2024
AmericasNLP @ NAACL 2024 Keynote: <i>Cultural NLP & Image Transcreation</i> [slides video]	Jun 2024
Google Research India <i>Decode with Google</i> [video]	Aug 2022
CVIT Summer School, IIIT Hyderabad Tutorial: <i>An Introduction to (Modern) TensorFlow</i> [slides]	Aug 2021
Rotaract Club, BITS Hyderabad <i>Journey into Research</i> [blog]	Jan 2021
ICSE National Topper [India Times Times of India Indian Express]	May 2013

Teaching and Leadership

Multimodal Machine Learning (Graduate Course), CMU <i>Teaching Assistant</i>	Fall '25
> TA for 11-777 Multimodal Machine Learning at CMU. Grade assignments and mentor course projects.	
Multilingual NLP (Graduate Course), CMU <i>Teaching Assistant</i>	Fall '23
> TA for 11737-Multilingual NLP at CMU, taught by Dr. Lei Li. Design assignments and guide course projects.	
Student Research Symposium, CMU <i>Co-Organizer</i>	Aug '23
> Co-organizing the student research symposium at CMU, a LTI-wide event for students to share their research.	
LTI LLM Hackathon, CMU <i>Co-Organizer</i>	Apr '23
> Co-organizing the LTI LLM Hackathon at CMU!	
AI Undergrad Mentorship Program, CMU <i>Mentor</i>	Spring '23
> Mentor to undergraduate students starting out with NLP research at CMU.	
Coffee Club Mentorship Program, Google <i>Co-Lead</i>	July '21 - July '22
> Co-Lead of the Coffee Club program at Google India.	
> Enabling women employees to seek mentorship from senior executives across Google.	
An Introduction to (Modern) TensorFlow <i>Co-Instructor</i>	Aug '21
> Conducted a hands-on Tensorflow tutorial session attended by 100+ members from Academia.	
Fireside Chat with Jeff Dean <i>Host</i>	Sep '20
> Hosted a Fireside Chat with Jeff Dean on his virtual Google India visit!	

Student Mentorship

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- > Parin Pengpun [Undergraduate, CMU]
 - > OpenNLP Labs Summer Cohort [Miscellaneous]
 - > Arnav Yayavaram [BITS Pilani, Hyderabad]
 - > Siddharth Yayavaram [BITS Pilani, Hyderabad]
 - > Yueqi Kaylin Song [Undergraduate, CMU]
 - > Sathyanarayanan Ramamoorthy [MIIS, CMU]
 - > Srinivas Gowriraj [MIIS, CMU]
 - > Helen Wang [Undergraduate, CMU]