

# AKHILA YERUKOLA

PhD in Computer Science — Carnegie Mellon University (CMU)  
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## RESEARCH INTERESTS

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My research focuses on improving the personalization and contextual reasoning of AI systems across various settings, with a particular emphasis on (a) **pragmatics and interactional contexts** to enable cooperative communication, and (b) the **cross-cultural safety and adaptation** of models.

## EDUCATION

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**Carnegie Mellon University, School of Computer Science** 2022 - Present  
*Doctor of Philosophy in Language Technologies Institute*  
*Advisor:* Prof. Maarten Sap

**Stanford University** 2017 - 2019  
*Master of Science in Computer Science*  
*Advisor:* Prof. Christopher Manning

**National Institute of Technology Trichy (NITT), Tamil Nadu, India** 2012 - 2016  
*Bachelor of Technology in Computer Science & Engineering*

## RESEARCH EXPERIENCE

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**Allen Institute for Artificial Intelligence (Ai2)** May 2025 - Current  
PhD Research Intern | *Advisors:* Maarten Sap, Valentina Pyatkin, Jena D. Hwang  
Project: Improving Pragmatic Communication in LLMs to Better Satisfy Users' Intended Goals

**UCLA, Department of Computer Science** June 2024 - Dec 2024  
Visiting Researcher | *Advisors:* Prof. Nanyun (Violet) Peng, Saadia Gabriel  
Project: Enhancing Multimodal Model Sensitivity to Non-Verbal Communication Cues across Cultures (Gestures, Actions, etc)

**UW, Paul G. Allen School of Computer Science & Engineering** March 2021 - March 2022  
Research Collaborator | *Advisors:* Prof. Yejin Choi  
Project: Evaluating Commonsense Reasoning in Story Generation Models

**Stanford University, Department of Computer Science** Sept 2018 - July 2019  
Graduate Research Assistant | *Advisors:* Prof. Christopher Manning, Abigail See  
Project: Story Telling Capabilities of Large Pretrained Models

## SELECTED PUBLICATIONS

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- Mind the Gesture: Evaluating AI Sensitivity to Culturally Offensive Non-Verbal Gestures**  
Akhila Yerukola, Saadia Gabriel, Nanyun Peng, Maarten Sap  
*Association for Computational Linguistics (ACL)*, 2025.
- Words Like Knives: Backstory-Personalized Modeling and Detection of Violent Communication**  
Jocelyn Shen, Akhila Yerukola, Xuhui Zhou, Cynthia Breazeal, Maarten Sap, Hae Won Park  
*Empirical Methods in Natural Language Processing (EMNLP)*, 2025.

3. **PolyGuard: A Multilingual Safety Moderation Tool for 17 Languages**  
Priyanshu Kumar, Devansh Jain, Akhila Yerukola, Liwei Jiang, Himanshu Beniwal, Thomas Hartvigsen, Maarten Sap  
*Conference on Language Modeling (COLM)*, 2025.
4. **NormAd: A Framework for Measuring the Cultural Adaptability of Large Language Models**  
Akhila Yerukola\*, Abhinav Rao\*, Vishwa Shah, Katharina Reinecke, Maarten Sap  
*Nations of the Americas Chapter of the Association for Computational Linguistics (NAACL)*, 2025.
5. **Is the Pope Catholic? Yes, the Pope is Catholic. Generative Evaluation of Intent Resolution in LLMs**  
Akhila Yerukola, Saujas Vaduguru, Daniel Fried, Maarten Sap  
*Association for Computational Linguistics (ACL)*, 2024.
6. **Don't Take This Out of Context! On the Need for Contextual Models and Evaluations for Stylistic Rewriting**  
Akhila Yerukola, Xuhui Zhou, Elizabeth Clark, Maarten Sap  
*Empirical Methods in Natural Language Processing (EMNLP)*, 2023.
7. **Beyond Denouncing Hate: Strategies for Countering Implied Biases and Stereotypes in Language**  
Jimin Mun, Emily Allaway, Akhila Yerukola, Laura Vianna, Sarah-Jane Leslie, Maarten Sap  
*Findings of Empirical Methods in Natural Language Processing (EMNLP)*, 2023.
8. **COBRA Frames: Contextual Reasoning about Effects and Harms of Offensive Statements**  
Xuhui Zhou, Hao Zhu, Akhila Yerukola, Thomas Davidson, Jena D. Hwang, Swabha Swayamdipta, Maarten Sap  
*Findings of Association for Computational Linguistics (ACL)*, 2022.
9. **Explainable Slot Type Attentions to Improve Joint Intent Detection and Slot Filling**  
Kalpa Gunaratna, Vijay Srinivasan, Akhila Yerukola, Hongxia Jin  
*Findings of Empirical Methods in Natural Language Processing (EMNLP)*, 2022.
10. **Data Augmentation for Voice-Assistant NLU using BERT-based Interchangeable Rephrase**  
Akhila Yerukola\*, Mason Bretan\*, Hongxia Jin  
*European Chapter of the Association for Computational Linguistics (EACL)*, 2021.
11. **Do Massively Pretrained Language Models Make Better Storytellers?**  
Abigail See, Akhila Yerukola\*, Aneesh Pappu\*, Rohun Saxena\*, Christopher D. Manning  
*Computational Natural Language Learning (CoNLL)*, 2019.

(\* equal contribution)

## INDUSTRY EXPERIENCE

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**Samsung Research America (SRA)**, Mountain View, USA Aug 2019 - June 2022  
 Senior AI Research Engineer | *Advisors: Hongxia Jin, Vijay Srinivasan*  
 — Worked on fine-grained natural language understanding for Bixby [EACL 2021]  
 — Built an internal AI Chatbot to handle HR, IT & Legal user queries [**SRA Q3 2021 President's Award**]  
 — Delivered a low-resource domain classification system for Bixby with a 50% error rate reduction, across Samsung's mobile phones and smart home products [**SRA Q4 2020 President's Award**]

Microsoft R&D, Hyderabad, India

June 2016 - Aug 2017

Software Engineer | *Advisors: Sudhakar Sadasivuni*

— Built Microsoft Social Engagement's sentiment analysis model to improve sales through social insights

— Developed an orchestration engine library for dense Azure cloud deployments

## TEACHING EXPERIENCE

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**Ethics, Safety, and Social Impact in NLP and LLMs 11-430/830**

Spring 2025

*Teaching Assistant*

**Instructor:** Prof. Maarten Sap

— Worked with a team of 3 TAs for 25 students to refine and grade course assignments, and mentored 2 course project student teams

**Advanced NLP 11-711**

Spring 2024

*Teaching Assistant*

**Instructor:** Prof. Graham Neubig

— Worked with a team of 7 TAs for 100 students to refine and grade course assignments, and mentored 5 course project student teams

**Natural Language Understanding CS224U**

Spring 2019

*Graduate Teaching Assistant*

**Instructors:** Prof. Christopher Potts, Prof. Bill MacCartney

— Worked with a team of 10 TAs for 250+ students to refine and grade course assignments. Mentored 11 course project student teams

— Taught a lecture on “Probing black box models”

**Machine Learning CS229**

Spring 2019

*Graduate Teaching Assistant*

**Instructor:** Adjunct Prof. Andrew Ng

— Worked with a team of 30+ TAs for 850+ students to develop new assignments, refine and grade course assignments. Mentored 30 course project student teams

**Delta, a web development club of NITT**

June 2013 - May 2014

*Undergraduate Volunteer Instructor*

— Taught basics of C++, Java and Android application development

## AWARDS

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- Recipient of K&L Gates Presidential Fellowship 2025-2026
- Q3 2021 SRA President's Award for excellence in research and innovation
- Q4 2020 SRA President's Award for excellence in research and innovation
- 2nd Best Project Award, CS231n (Convolutional Neural Networks for Visual Recognition) Stanford 2018. Picked out of 200+ projects.
- 2nd Best Project Award, CS224n (NLP with Deep Learning) Stanford 2018. Picked out of 145+ projects.
- Full-ride undergraduate scholarship by Ministry of Human Resource Development (MHRD), India 2012-2016. *The scholarship is awarded to the top 0.01 % of students in the All India Engineering Exam, 2012.*
- Third Highest GPA Award, 2015. Awarded by the Department of Computer Science, NITT.

## PROFESSIONAL EXPERIENCE AND VOLUNTEERING

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**Organizer:** Socially Responsible Language Modelling Research (SoLaR) Workshop at COLM 2025, Generation, Evaluation, Metrics (GEM) Benchmark and Workshop at ACL 2021

**Reviewer:** ARR July 2025, ARR May 2025, NLP4PosImpact 2025, ARR Feb 2025, C3NLP 2025, NAACL 2025, ACL 2024, EMNLP 2024 (**Outstanding Reviewer**), NAACL 2024, EMNLP 2023, EMNLP 2020

**Secondary Reviewer:** NAACL-HLT 2021, COLING 2020, CIKM 2020

**Volunteer:** EMNLP 2021, EMNLP 2020

## STUDENT MENTORSHIP

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- Jenna Godsey (Undergraduate at CMU)
- Tianyu Cao (MIIS at CMU)
- Neel Bhandari (MIIS at CMU)
- Sanidhya Vijayvargiya (MSCS at CMU)
- Vishwa Shah (MIIS at CMU)
- Abhinav Rao (MIIS at CMU)
- Hyuk Joon Kwon (Intern at Samsung Research America)

## DEPARTMENTAL SERVICE

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- Member of Belonging and Engagement at LTI Committee, 2025
- LTI Student Mentoring Program, 2024
- LTI Student Mentoring Program, 2023
- Member of the Stanford MSCS Admissions Committee, 2019. Reviewed student applications with faculty to select the incoming MS students for 2020.
- Editor of Bits and Bytes, the official newsletter of the Department of Computer Science, NITT, 2016. Managed a team of 10 people to release a newsletter twice a month.
- Head of Public Relations at Vortex, Annual Symposium of Department of Computer Science, NITT, 2016.