

Akhilesh Kakolu Ramarao

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EMPLOYMENT

2021– **Heinrich-Heine-Universität Düsseldorf**

Wissenschaftlicher Mitarbeiter, Department of English Language and Linguistics

- Teaching Computational Linguistics courses for Bachelor and Masters of Arts students
- Setup phonetics laboratory
- Maintainer of Slamlab (<https://slam.phil.hhu.de/>) server, hosting multiple services

2019–20 **Civicalab**

Natural Language Processing (NLP) Researcher

- Worked on building Language Platform for Assamese language that includes - Optical Character Recognition for Assamese, Machine Translation system for English and Assamese, Assamese keyboard, rich text editor and creation of parallel corpora for English and Assamese

2017–19 **Skit.ai**

Software Engineer

- Involved in designing and developing end-to-end speech and natural language processing A.I. systems for automating customer care systems

2017 **Ramco Systems**

Software Engineer

- Prime developer in designing and developing a chatbot for Human Resource (HR) system

EDUCATION

Ph.D (ongoing)

General Linguistics, Heinrich-Heine-Universität Düsseldorf, Germany
Advisors: Prof. Dr. Kevin Tang and Dr. Dinah Baer-Henney

M.A.

General Linguistics, Heinrich-Heine-Universität Düsseldorf, Germany, 2022-2024
Advisors: Dr. Dinah Baer-Henney and Prof. Dr. Kevin Tang

RESEARCH AREAS

Computational Linguistics, Computational Morphology, Language Revitalization

SKILLS

Recent programming experience: Python, Bash, LaTeX, Scheme, Julia

Past programming experience: Haskell, Dart, JavaScript (AngularJS)

Frameworks: PyTorch, Flutter, Django

Databases: MySQL, PostgreSQL

Platforms: Arch linux, Ubuntu, MacOS

Cloud: AWS, GCP, High-performance computing (HPC)

Other technologies: Git, Docker, Neovim, Hugo, Jekyll, CI/CD

PUBLICATIONS

Journal Articles

- 2024 Muschalik, J., Schmitz, D., **Kakolu Ramarao, A.** *et al.* Typing /s/—morphology between the keys? *Reading and Writing* (2024).
<https://doi.org/10.1007/s11145-024-10586-9>

Conference Proceedings

- accepted **Kakolu Ramarao, A.**, Tang K. & Baer-Henney D. Frequency matters: Modeling irregular morphological patterns in Spanish with Transformers. In *Findings of the Association for Computational Linguistics: ACL 2025*, Vienna, Austria. Preprint:
<https://arxiv.org/pdf/2410.21013>
- accepted Merchant R., **Kakolu Ramarao A.** & Tang K. Connecting the Persian-speaking world through transliteration. *3rd North American Conference on Iranian Linguistics*. Preprint:
<https://arxiv.org/pdf/2502.20047>
- 2024 **Kakolu Ramarao, A.**, Petersen, W., Stein, A., Stein, E., & Xia, H. (2024). KlarTextCoders at StaGE: Automatic Statement Annotations for German Easy Language. In *Proceedings of GermEval 2024 Shared Task on Statement Segmentation in German Easy Language (StaGE)* (pp. 15–27), Vienna, Austria. Association for Computational Linguistics.
<https://aclanthology.org/2024.germeval-1.2.pdf>
- 2023 Jeong, C., Schmitz, D., **Kakolu Ramarao, A.**, Stein, A., & Tang, K. (2023). Linear discriminative learning: a competitive non-neural baseline for morphological inflection. In *Proceedings of the 20th SIGMORPHON Workshop on Computational Research in Phonetics, Phonology, and Morphology* (pp. 138–150). Association for Computational Linguistics.
<https://doi.org/10.18653/v1/2023.sigmorphon-1.16>

- 2022 **Kakolu Ramarao, A.**, Zinova, Y., Tang, K., & van de Vijver, R. (2022). HeiMorph at SIGMORPHON 2022 shared task on morphological acquisition trajectories. In *Proceedings of the 19th SIGMORPHON Workshop on Computational Research in Phonetics, Phonology, and Morphology* (pp. 236-239). Association for Computational Linguistics.
<https://doi.org/10.18653/v1/2022.sigmorphon-1.24>

TALKS

Peer-reviewed Talks

- 2024 “Community-driven Language Revitalization: Translating Children’s Literature in K’man Mishmi” at the International Conference on Language, Ecology and Culture 2024, NEILAC, Guwahati, India. Co-authors: Sakelu Chikro and Dr. Pamir Gogoi. [Slides](#)
- 2024 “KlarTextCoders at StaGE: Automatic Statement Annotations for German Easy Language” at the Konferenz zur Verarbeitung natürlicher Sprache (KONVENS) 2024, University of Vienna, Austria. Co-authors: Wiebke Petersen, Anna Sophia Stein, Emma Stein, and Hanxin Xia.
- 2024 “A computational approach to understanding the cognitive reality of morphomic patterns: the case of L-shaped morphemes in Spanish” at the Annual Meeting of Linguistics Association of Great Britain and Northern Ireland 2024, Newcastle University, United Kingdom. Co-authors: Kevin Tang and Dinah Baer-Henney. [Slides](#).
- 2024 “Acoustic Analysis of Vowels in Idu Mishmi” at the 27th Himalayan Languages Symposium, IIT Guwahati, India. Co-author: Pamir Gogoi.
- 2023 “From Zero to Terminal Hero” at the 32nd Tagung der Computerlinguistik-Studierenden (TaCoS), Heinrich Heine University, Düsseldorf, Germany. [Slides](#)
- 2023 “Can Neural Networks learn human-like behavior when inflecting verbs? The case of Spanish” at the Five-Minute Linguist competition, Linguistic Society of America 97th Annual Meeting, Denver, Colorado, United States of America.
- 2023 “Modeling irregular morphological patterns using Transformers” at the HeiCAD Lightning Talks, Heinrich Heine University, Düsseldorf, Germany

Invited Talks

- 2021 “Language Revitalization: A case of Idu Mishmi” at Microsoft Research India
- 2021 “Language Revitalization” at Navana Tech

POSTER PRESENTATIONS

Peer-reviewed Presentations

- 2024 **Kakolu Ramarao, A.**, & Stein, A. S. AnglistikVoices: an L2 English speech dataset for educational and technological advancement in speech technology. LabPhon 19, Hangyang University, Seoul, South Korea. [Poster](#)
- 2023 Muschalik, J., Schmitz, D., **Kakolu Ramarao, A.**, & Baer-Henney, D. Acoustic duration and typing timing - same, same... but different? Phonetics and Phonology in Europe 2023, Nijmegen, Netherlands

- 2023 Tang, K., **Kakolu Ramarao, A.**, & Baer-Henney, D. Modeling irregular morphological patterns with recurrent neural network: the case of the L-shaped morpheme. 13th Mediterranean Morphology Meeting, University of the Aegean, Greece

TEACHING

Heinrich-Heine-Universität Düsseldorf

Summer 2025	Academic Writing
Summer 2025	Applied Phonology: Evaluating Voice Assistants (co-teaching: Erdin Mujezinović)
Winter 2024	LLMs in Linguistic Research
Summer 2024	Learning Inflection
Winter 2023	Accent unplugged: Evaluating Voice assistants
Summer 2023	Synthesizing speech
Winter 2022	Language technology for Linguists with Internet of Things (IoT)
Winter 2022	LaTeX for Linguists
Summer 2022	Towards a career in language technology: linguistic annotation
Winter 2021	Basic Skills in Digital Humanities

GRANTS AND AWARDS

- 2022 Hardware Grant. 20 × NVIDIA® Jetson™ Nano Developer Kits. NVIDIA Academic Hardware Grant, “FOSStering Digital Humanities through Accent Diversity & Conversational Devices”. Co-applicant: Kevin Tang
- 2022 Education Grant. €9,424. e-Learning support fund, Heinrich-HeineUniversity Düsseldorf. “Interactive web-based review units for phonetics and phonology”. Co-applicant: Christopher Geissler and Kevin Tang
- 2022 **First prize** at the HHU Legal Hackathon, Heinrich-Heine-Universität. Team: Akhilesh Kakolu Ramarao, Phaedon Paschalis and Diana Schill
- 2022 **First prize** at the HeiCAD Lightning Talks, Heinrich-Heine-Universität

FIELDWORK

- 2020 **Idu Mishmi community**
Roing, Arunachal Pradesh, India
- Built the first ever E-Dictionary for Idu Mishmi and English in the form of an offline mobile dictionary application
 - Press coverage: <https://arunachaltimes.in/index.php/2020/12/14/imcls-launches-mishmi-idu-dictionary-app/>

CONSULTING

2020-2021	XRI Institute
2020-2021	Vrook

VOLUNTEERING

2021-	Idu Mishmi Cultural and Literary Society (IMCLS) Chief Coordinator
2021-	Lohit Youth Library Network Volunteer

WORKSHOP ORGANIZATION

2024	Language learning workshop in K'man Mishmi, Bamboosa Library, Tezu, Arunachal Pradesh, India. Co-organizers: Sakelu Chikro and Dr. Pamir Gogoi
2023	Translation Workshop: English to K'man Mishmi, Bamboosa Library, Tezu, Arunachal Pradesh, India
2022	LibreSlam - Free and Open Source (FOSS) for everybody workshop at Heinrich-Heine-Universität Düsseldorf

DEMOS

2024	“Students as Researchers” at the Nacht der Wissenschaft, Shadowplatz, Düsseldorf, Germany
2022	“Role of linguistics in AI for social good” at the Nacht der Wissenschaft, Shadowplatz, Düsseldorf, Germany

LANGUAGES

English	<i>Fluent</i>
Kannada	<i>Fluent</i>
Hindi	<i>Advanced</i>
German	<i>Beginner (A1 level)</i>