Akhilesh Kakolu Ramarao

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EMPLOYMENT

2021- Heinrich-Heine-Universität Düsseldorf

Wissenschaftlicher Mitarbeiter, Department of English Language and Linguistics

2019-20 Civicdatalab

Natural Language Processing (NLP) Researcher

2017–19 **Skit.ai**

Software Engineer

2017 Ramco Systems

Software Engineer

EDUCATION

M.A. General Linguistics, Heinrich-Heine-Universität Düsseldorf, Germany, 2022-2024

B.Engg. Automobile Engineering, Dayanand Sagar College of Engineering, India, 2012-2016

RESEARCH AREAS

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

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

- 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
- 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
- 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

Under Review

- **Kakolu Ramarao.** A, Tang K. & Baer-Henney D. [ANONYMIZED]. Association for Computational Linguistics
- Merchant R., **Kakolu Ramarao A.** & Tang K. Connecting the Persian-speaking world through transliteration

TALKS

Peer-reviewed Talks

- "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. <u>Slides</u>
- "Klar Text Coders at StaGE: Automatic Statement Annotations for German Easy Language" at the Konferenz zur Verarbeitung natürlicher Sprache (KONVENS) 2024, University of Vienna, Austria.
- "A computational approach to understanding the cognitive reality of morphomic patterns: the case of L-shaped morphomes in Spanish" at the Annual Meeting of Linguistics Association of Great Britain and Northern Ireland 2024, Newcastle University, United Kingdom. Slides
- "Acoustic Analysis of Vowels in Idu Mishmi" at the 27th Himalayan Languages Symposium, IIT Guwahati, India
- "From Zero to Terminal Hero" at the 32nd Tagung der Computerlinguistik-Studierenden (TaCoS), Heinrich Heine University, Düsseldorf, Germany. <u>Slides</u>

- "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
- "Modeling irregular morphological patterns using Transformers" at the HeiCAD Lightning Talks, Heinrich Heine University, Düsseldorf, Germany

Invited Talks

"Language Revitalization: A case of Idu Mishmi" at the Microsoft Research India

2021 "Language Revitalization" at the Navana Tech

POSTER PRESENTATIONS

Peer-reviewed Presentations

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

TEACHING

Heinrich-Heine-Universität Düsseldorf

Winter 2024 LLMs in Linguistic Research

Summer 2024 Learning Inflection

Winter 2022 Accept upplygged: Evaluating Voice assis

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

- Hardware Grant. 20 × NVIDIA® JetsonTM Nano Developer Kits. NVIDIA Academic Hardware Grant, "FOSStering Digital Humanities through Accent Diversity & Conversational Devices". Co-applicant: Kevin Tang
- 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

First prize at the HHU Legal Hackathon, Heinrich-Heine-Universität. Team: Akhilesh

Kakolu Ramarao, Phaedon Paschalis and Diana Schill

First prize at the HeiCAD Lightning Talks, Heinrich-Heine-Universität

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

CONFERENCE/WORKSHOP ORGANIZATION

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

"Students as Researchers" at the Nacht der Wissenschaft, Shadowplatz, Düsseldorf, Germany

"Role of linguistics in AI for social good" at the Nacht der Wissenschaft, Shadowplatz,

Düsseldorf, Germany

LANGUAGES

English Fluent

Kannada Fluent

Hindi Advanced

German Beginner (A1 level)