

# VSDS Mahesh Akavarapu

📍 Seminar für Sprachwissenschaft, R. 158, Keplerstraße 2, Tübingen 72074    ✉ mahesh.akavarapu@uni-tuebingen.de  
 🔗 mahesh-ak.github.io    🌐 mahesh-akavarapu    🔄 mahesh-ak

## Research Interests

Computational Linguistics / Natural Language Processing, Historical Linguistics

Specifically: Computational Historical Linguistics, Speech Processing, Low Resource NLP

## Education

- |            |  |                       |
|------------|--|-----------------------|
| <b>PhD</b> | <b>Indian Institute of Technology Kanpur</b> , Computer Science  | July 2019 – Sept 2024 |
|            | <ul style="list-style-type: none"> <li>GPA: 3.84/4.00 (9.6/10.0)</li> <li>Advisor: Prof. Arnab Bhattacharya</li> </ul> |                       |
| <b>BT</b>  | <b>Indian Institute of Technology Kanpur</b> , Computer Science, Physics (Second Major)                                | July 2014 – May 2019  |
|            | <ul style="list-style-type: none"> <li>GPA: 3.72/4.00 (9.3/10.0)</li> </ul>  |                       |

## Awards / Honors

**Prime Minister's Research Fellowship (2019-24):** Grant of INR 200,000 per year (approx. USD 12,000 in total) from Ministry of Education, Government of India

**Academic Excellence Award from IIT Kanpur (2015):** Awarded to Top 10% students of the batch

## Experience

- |  |                      |
|--|----------------------|
| <b>University of Tübingen</b> , Postdoctoral Researcher  | Tübingen, Germany    |
| <ul style="list-style-type: none"> <li>Advisor: Prof. Gerhard Jäger</li> </ul>   | Jan 2025 – present   |
| <b>Indian Institute of Technology Kanpur</b> , Research Fellow   | Kanpur, India        |
| <ul style="list-style-type: none"> <li>Under Prime Minister's Research Fellowship (Advisor: Prof. Arnab Bhattacharya)</li> </ul> | Aug 2019 – July 2024 |
| <b>Indian Institute of Technology Kanpur</b> , Student Researcher, Intern  | Kanpur, India        |
| <ul style="list-style-type: none"> <li>High Performance Computing in CUDA (Advisor: Prof. Mahendra K. Verma)</li> </ul>          | May 2018 – July 2018 |

## Publications

### A Case Study of Cross-Lingual Zero-Shot Generalization for Classical Languages in LLMs

V.S.D.S.Mahesh Akavarapu, Hrishikesh Terdalkar, Pramit Bhattacharyya, Shubhangi Agarwal, Vishakha Deulgaonkar, Pralay Manna, Chaitali Dangarikar, Arnab Bhattacharya

Accepted to Findings of **ACL 2025**

### A Likelihood Ratio Test of Genetic Relationship among Languages

June 2024

V.S.D.S.Mahesh Akavarapu, Arnab Bhattacharya

Proc. of **NAACL 2024**, Mexico City, Mexico

### Automated Cognate Detection as a Supervised Link Prediction Task with Cognate Transformer

Mar 2024

V.S.D.S.Mahesh Akavarapu, Arnab Bhattacharya

Proc. of **EACL 2024**, St. Julian's, Malta

### Cognate Transformer for Automated Phonological Reconstruction and Cognate Reflex Prediction

Dec 2023

V.S.D.S.Mahesh Akavarapu, Arnab Bhattacharya

Proc. of **EMNLP 2023**, Singapore

## Invited Talks

---

- Evolutionary Biology-Inspired Language Models in Historical Linguistics, University of Tübingen (Online), Apr. 2024
- Tutorial on LLMs: Finetuning and Prompting, with Arnab Bhattacharya and Shubham K. Nigam, NIT Warangal (Online), Mar. 2024
- Tutorial on Legal Named Entity Recognition, with Shubham K. Nigam, NIT Trichy (Online), Dec. 2022

## Teaching Assistance

---

- (CS 689) *Computational Linguistics for Indian Languages*, Instructor: Prof. Arnab Bhattacharya (Spring 2024, Fall 2022)
- (CS 63) *Theory of Computation*, Instructor: Dr. Raghunath Tewari (Fall 2023, Fall 2022)
- (CS 315) *Principles of Database Systems*, Instructor: Prof. Arnab Bhattacharya (Spring 2023, Spring 2021)
- (CS 657) *Information Retrieval*, Instructor: Prof. Arnab Bhattacharya (Spring 2022)
- (CS 771) *Introduction to Machine Learning*, Instructor: Dr. Nisheeth Srivastava (Fall 2021)
- (CS 685) *Data Mining*, Instructor: Prof. Arnab Bhattacharya (Fall 2020)
- (ESC 101) *Fundamentals of Computing*, Instructor: Dr. Nisheeth Srivastava (Spring 2020), Dr. Piyush Rai (Fall 2019)

## Technologies

---

**Languages:** Python, C/C++, HTML, Shell Scripting etc

**Libraries:** PyTorch, TensorFlow, LangChain, HuggingFace etc

## Personal Details

---

**Full Name:** Akavarapu, Venkata Satya Durga Sai Mahesh

**Gender:** Male, **Age:** 28, **Nationality:** Indian