

VSDS Mahesh Akavarapu

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Research Interests

Computational Linguistics / Natural Language Processing, Historical Linguistics

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

Education

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

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

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

Publications

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	
Creation of a Digital Rig Vedic Index (Anukramani) for Computational Linguistic Tasks	Jan 2023
V.S.D.S.Mahesh Akavarapu, Arnab Bhattacharya	
Proc. of World Sanskrit Conference 2023 , Canberra, Australia	

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