

Jaisidh Singh

Resume

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[Website](#) [Github](#) [Linkedin](#) [Google Scholar](#)

Education

- 2024–present **MSc in Machine Learning**, *Eberhard-Karls Universität Tübingen*, Tübingen.
Researched toy models of generalization and efficient representation learning in foundation models.
- 2020–2024 **B.Tech in AI & Data Science**, *Indian Institute of Technology*, Jodhpur.
Thesis topic: negation-aware compositional reasoning in multimodal foundation models.

Awards & fellowships: Konrad Zuse School (ELIZA) Fellowship for Master's students in Germany 2024–2026.

Key Publications

- 2025 **(Almost) Free Modality Stitching of Foundation Models**, *EMNLP 2025, ICLR WSL 2025*,
Jaisidh Singh, Diganta Misra, Boris Knyazev, Antonio Orvieto.
- 2025 **Learning the Power of “No”: Foundation Models with Negations**, *WACV 2025*,
*Jaisidh Singh**, *Ishaan Shrivastava**, Mayank Vatsa, Richa Singh, Aparna Bharati.

Work/Research Experience

- Jan 2025 – **Guest Researcher at Max Planck Institute for Intelligent Systems**, *With Antonio Orvieto*.
present
○ Analyzed inductive biases (via architecture & optimization) on transformer generalization dynamics.
○ Devised novel hypernetworks for multimodal stitching in association with ELLIS Institute Tübingen.
- Sept 2025 – **Graduate Researcher at Tübingen AI Center**, *With Peter Gehler*.
present
○ Delivered a workshop on creating agentic systems via LangGraph at GCPR 2025 as part of Minerva.
○ Developed computer vision technologies to enhance cultural engagement at Stadtmuseum Tübingen.
- Jan 2025 – **Graduate Researcher at ELLIS Institute Tübingen**, *With Antonio Orvieto*.
May 2025
○ Created a hypernetwork-based framework for efficient (10×) modality stitching for CLIP and multimodal LLMs. Published at EMNLP 2025 and ICLR 2025 WSL Workshop in association with MPI-IS Tübingen.
- Winter 2022 **Undergraduate Researcher at Trusted AI Lab IITJ**, *With Mayank Vatsa & Richa Singh*.
& 2023
○ Researched negation understanding in vision-language models, published at WACV 2025.
○ Analysed identity leakage in GAN latent space, published at WACV 2024.
- Summer **Research Intern at Bosch Research India**, *With Amit A. Kale & Sonam Singh*.
2022 & 2023
○ Developed image retrieval pipelines for internal experiments.
○ Devised an interpretable failure discovery system (upto 95% accuracy) for segmentation models.

Key Projects

- **loraclip**: python library to cleanly wrap adding LoRA to CLIP. (40 ⭐ on [GitHub](#))
- **pytorch-mixtures**: a minimalist library for MoEs in PyTorch. (26 ⭐ on [GitHub](#))

Technical Skills

- **Languages**: English (Fluent + Professional), Hindi (Native), German (A1)
- **Machine learning**: PyTorch, JAX/FLAX, Haiku, Huggingface
- **Distributed training & HPC tools**: Slurm, HTCondor, Data/Model/Tensor Parallel
- **Agentic tools**: dsPy, LangGraph, LangChain, Claude Code, OpenCode
- **SWE tools**: Selenium, ReactJS, NodeJS, ExpressJS, Flutter, Git, GraphQL
- **Programming languages**: Python, \LaTeX , JavaScript, Dart, Bash, C++