Adarsh Jamadandi

Research interests: Graph Representation Learning and Geometric Deep Learning.
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Google Scholar

Education

Universität des Saarlandes, Saarbrücken, Germany. *November 2020 - August 2024*
Masters in Computer Science
Master Thesis : On the Importance of Graph-Task Alignment for Graph Neural Networks.

B.V.Bhoomaraddi College of Engineering and Technology, Hubli, India. *August, 2014 - June, 2018*
B.E in Electronics and Communication Engineering.
Bachelor Thesis: Anomaly Detection in Unlabeled Videos.

Work Experience

SprintML Lab, CISPA. *Jan, 2025 - August,2025*
Research Assistant
Understanding generalization behavior in GNNs.

Relational ML Lab, CISPA. *Nov, 2022 - October,2024*
Research Assistant
Worked on addressing over-squashing and over-smoothing in GNNs.

Modelling and Simulation Lab, Saarland Informatics Campus. *Nov, 2021 - Jan, 2023.*
Research Assistant
Worked on modelling molecular spectra using graph neural networks.

KLE Technological University, India. *April, 2019 - April, 2020*
Research Associate
Deep Learning for Underwater Image Enhancement.

Silicon14 Inc. India. *February, 2017 - May, 2020*
Chief Technology Officer and Co-Founder
Developed hardware augmentations/low-cost sensors
for embedded systems and IoT.

Publications

6. **Finding Memo(rization) in Graph Neural Networks.**
   Adarsh Jamadandi*, Jing Xu, Adam Dziedzic and Franziska Boenisch.
   Preprint, May 2025.

5. **GNNs Getting ComFy : Community and Feature Similarity Guided Rewiring.**
   Celia Rubio-Madrigal*, Adarsh Jamadandi*, and Rebekka Burkholz.
   equal contributions.* International Conference on Learning Representations, **ICLR,2025.

4. **Spectral Pruning Against Over-Squashing and Over-Smoothing.**
   Adarsh Jamadandi*, Celia Rubio-Madrigal* ,and Rebekka Burkholz.
   equal contributions.* Advances in Neural Information Processing Systems, **NeurIPS, 2024.

3. **Graph of Thrones : Adversarial Perturbations dismantle Aristocracy in Graphs.**
   Adarsh Jamadandi and Uma Mudenagudi. **AAAI, Student Poster, 2021.**

2. **Probabilistic Word Embeddings in Kinematic Space.**
   Adarsh Jamadandi, Rishabh Tigadoli, Ramesh Tabib and Uma Mudenagudi.
   International Conference on Pattern Recognition (**ICPR, 2020**).

1. **Exemplar Based Underwater Image Enhancement augmented by Wavelet Corrected Transforms.**
   Adarsh Jamadandi and Uma Mudenagudi .
   Computer Vision and Pattern Recognition (**CVPR** Workshop, Oral), 2019.

Talks

CEVI Vision++ Talk Series, India. *June, 2025*
Learning on Graphs: Strategies for Improving and Understanding Generalization in Graph Neural Networks.

Neptune AI Video Interview. *Jan, 2025*
How spectral graph pruning can help address over-squashing and over-smoothing.

Helmholtz AI Conference, Dusseldorf. *June, 2024*
How to mitigate both over-squashing and over-smoothing in GNNs?

Selected Awards and Honors

- **Adarsh Jamadandi**, Sujata C, Uma Mudenagudi and Ashok Shettar,
  System and Method for Video Summarization **201941003790, Patent Pending**. *January, 2019*
- **Adarsh Jamadandi** and Samar A M, Accexlron - A Rapid Prototyping Development Board.
  Best US-based Project by Hackster.io *March, 2019*.