Leena Chennuru Vankadara

⚲ 30-5/A11, Theory of Machine learning group,
Tübingen AI research building,
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Education

International Max Planck Research School for Intelligent Systems
PhD, Machine learning,   2018 - Present.

Research interests. Causality, High-dimensional Statistics, Statistical-computational tradeoffs, Kernel Methods.

Advisors. Prof. Debarghya Ghoshdastidar, Prof. Dr. Ulrike von Luxburg.

University of Tübingen
Master thesis, 2017, **Advisor.** Prof. Dr. Ulrike von Luxburg   Grade 1.0/1.0.

University of Hamburg
Master of Science, Intelligent Adaptive Systems, 2014 - 2017,   Grade:1.10/1.0.

Birla Institute of Technology and Sciences, Pilani
Bachelor of Science, Mathematics, 2007 - 2012,   Grade. 8.85/10.
Bachelor of Engineering, Mechanical Engineering, 2007 - 2012,   Grade. 7.22/10.

Experience

Amazon
Research Scientist Intern (Causality Lab). Theoretically investigation into when good statistical forecasting models also make good causal models.   2020 - 2021

Max Plank Institute for Intelligent Systems, Tübingen
Research Intern (Statistical Learning Theory group). Investigated theoretical properties of embedding doubling metric spaces into L^p space.   2018

University of Hamburg
Research Assistant, Writer identification in Manuscripts and creation of a web based, interactive image processing tool.   2015 - 2017

Research Assistant, Creation of simulated interactive environments for experimentation in object tracking, sound localization and gesture recognition.   2015

Student Assistant, Design and development of haptic maps.   2014 - 2015

Teaching Experience

Department of Computer Science, University of Tübingen
Teaching Assistant for Statistical Machine learning   2017 - 2019
Involved creating weekly assignments, grading the submissions and conducting tutorial sessions.

Department of Mathematics, BITS Pilani
Teaching Assistant for the course Real Analysis   2011
Involved conducting tutorials and support in consultation hour.

Selected Publications

Leena C Vankadara, Luca Rendsburg, Ulrike von Luxburg, Debharghya Ghosdastidar. Interpolation and Regularization for Causal Learning. arXiv:2202.09054. **Preprint (2022).**

Mahalakshmi Sabanayagam, **Leena C Vankadara**, Debarghya Ghoshdastidar. Consistency of Clustering and Two-sample Testing of Graphons. **ICLR (2022)**.

Leena C Vankadara, Philipp Michael Faller, Lenon Minorics, Debarghya Ghoshdastidar, Dominik Janzing. Causal Forecasting: Generalization Bounds for Autoregressive Models. arXiv:2111.09831. **Preprint (2021)**.

Pascal Esser, **Leena C Vankadara**, Debarghya Ghoshdastidar. Learning Theory Can (Sometimes) Explain Generalisation in Graph Neural Networks. **NeurIPS (2021)**.

Leena C Vankadara, Sebastian Brodt, Ulrike von Luxburg, Debarghya Ghoshdastidar. Recovery Guarantees for Kernel-based Clustering under Non-parametric Mixture Models. **AISTATS (2021)**. **Oral presentation** (3% of total submissions).

Leena C Vankadara, Debarghya Ghoshdastidar. On the optimality of kernels for high-dimensional clustering. **AISTATS (2020)**.

Leena C Vankadara, Siavash Haghiri, Michael Lohaus, Faiz Ul Wahab, Ulrike von Luxburg, Insights into ordinal embedding algorithms: a systematic evaluation. arXiv:1912.01666. **Preprint (2019).**

Leena C Vankadara, Ulrike von Luxburg. Measures of distortion for machine learning. **NeurIPS (2018)**.

Invited Talks

WiDS Conference at Chemnitz,
SIAM Conference on Imaging Science,
The AI Club, NIT Calicut.

Grants

PhD/Postdoc Grant, Tübingen AI Center

Reviewing

JMLR, ICML, AISTATS, NeurIPS, IJCAI.

Programming

Python, Matlab

Other Awards

'Award winning graduate" (top 1% of students). **University of Hamburg.**
Travel Award. **NeurIPS 2018.**
Top of the class in many Department (Mathematics) subjects and all elective courses. **BITS Pilani.**
National runner up in the Golden Design Challenge for the design of a high quality water purification system. **Indian Institute of Technology, Madras.**
National finalist in a design competition for the design of an Automated car parking system. **Indian Institute of Technology, Bombay.**
Scholarship for a fully funded Secondary Education. **Shri Kalyana Chakravarthy Trust.**
State level rank holder. **Indian National Mathematics Olympiad.**