

# ROBI BHATTACHARJEE

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Tübingen 72076, Germany

## CONTACT INFORMATION

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github.com/robibhatt

## EDUCATION

University of California, San Diego  
PhD in Computer Science, Fall 2018 – July 2023  
Advised by Kamalika Chaudhuri and Sanjoy Dasgupta  
Massachusetts Institute of Technology  
Bachelor of Science, General Mathematics, June 2016

## WORK EXPERIENCE

<b>Postdoctoral Researcher</b>	University of Tübingen Tübingen, Germany	Oct 2023 – Present
Supervised by Ulrike von Luxburg. Conducting research in theoretical machine learning.		
<b>PhD Student, Graduate RA</b>	UC San Diego San Diego, CA	Fall 2018 – July 2023
Conducted research in adversarial robustness, clustering, and trustworthy ML under Kamalika Chaudhuri and Sanjoy Dasgupta.		
<b>Assistant Trader</b>	Five Rings Capital New York, NY	June 2016 – July 2017
Developed automated trading strategies; coded simulations on historical market data.		
<b>Research Intern</b>	Jane Street Capital New York, NY	Summer 2015
Worked on trading strategies and statistical tools for improving them.		
<b>Software Engineering Intern</b>	Google Mountain View, CA	Summer 2014
Studied the effect of over- and under-sampling to resolve class imbalance for fraud detection.		
<b>Trading/Research Intern</b>	Jane Street Capital New York, NY	Summer 2013
Worked on trading strategies and participated in mock trading exercises.		

## TEACHING

**Teaching Assistant, Seminar “Explainable Machine Learning”**  
University of Tübingen, Summer 2024  
Co-led by Ulrike von Luxburg, Gunnar König, Sebastian Bordt, and Robi Bhattacharjee. Delivered lectures (e.g. on LIME/SHAP), guided student presentations, and organized the seminar schedule.

**Teaching Assistant, CSE 251B (Graduate Machine Learning)**  
UC San Diego, Winter 2022  
Led discussion sections, held office hours, graded assignments and exams.

**Teaching Assistant, CSE 251B (Graduate Machine Learning)**  
UC San Diego, Winter 2021  
Led discussion sections, held office hours, graded assignments and exams.

## SUPERVISION

**Clara Groethans**, Master’s Student, University of Tübingen, Oct 2024 – Jun 2025

Thesis: *Understanding the Interplay between Model Complexity and Explanation Quality: Measuring Local Fidelity.*

**Harald Kugler**, Master’s Student, University of Tübingen, Apr 2024 – Oct 2024

Thesis: *Towards a Reliable and Scalable Data-Copying Detection Algorithm Using Random Projections.*

## PUBLICATIONS

Robi Bhattacharjee, Geelon So, and Sanjoy Dasgupta. “Consistency of the  $k_n$ -nearest neighbor rule under adaptive sampling.” NeurIPS 2025.

Robi Bhattacharjee, Karolin Frohnapfel, and Ulrike von Luxburg. “How to Safely Discard Features Based on Aggregate SHAP Values.” COLT 2025.

Robi Bhattacharjee and Ulrike von Luxburg. “Auditing Local Explanations is Hard.” NeurIPS 2024.

Robi Bhattacharjee, Sanjoy Dasgupta, and Kamalika Chaudhuri. “Data-Copying in Generative Models: A Formal Framework.” ICML 2023.

Robi Bhattacharjee, Max Hopkins, Akash Kumar, Hantao Yu, and Kamalika Chaudhuri. “Robust Empirical Risk Minimization with Tolerance.” ALT 2023.

Robi Bhattacharjee, Jacob Imola, Michal Moshkovitz, and Sanjoy Dasgupta. “Online  $k$ -means Clustering on Arbitrary Data Streams.” ALT 2023.

Robi Bhattacharjee and Gaurav Mahajan. “Learning What to Remember.” ALT 2022.

Robi Bhattacharjee and Kamalika Chaudhuri. “Consistent Non-Parametric Methods for Maximizing Robustness.” NeurIPS 2021.

Robi Bhattacharjee, Somesh Jha, and Kamalika Chaudhuri. “Sample Complexity of Adversarially Robust Linear Classification on Separated Data.” ICML 2021.

Robi Bhattacharjee and Michal Moshkovitz. “No-substitution  $k$ -means Clustering with Adversarial Order.” ALT 2021.

Robi Bhattacharjee and Kamalika Chaudhuri. “When are Non-Parametric Methods Robust?” ICML 2020.

Robi Bhattacharjee and Sanjoy Dasgupta. “What Relations are Reliably Embeddable in Euclidean Space?” ALT 2020.

## PREPRINTS / IN SUBMISSION

Eric Günther, Balázs Szabados, Robi Bhattacharjee, Sebastian Bordt, and Ulrike von Luxburg. “Informative Post-Hoc Explanations Only Exist for Simple Functions.” arXiv preprint, 2025.

Robi Bhattacharjee, Nick Rittler, and Kamalika Chaudhuri. “Beyond Discrepancy: A Closer Look at the Theory of Distribution Shift.” In submission.

## SERVICE

Reviewer, Neurips 2025

Reviewer, ICLR 2025

Reviewer, ALT 2025

Reviewer, ICML 2025

Reviewer, Neurips 2024

Reviewer, ICML 2024

Reviewer, ICML 2023

Reviewer, ICML 2022

Reviewer, ICML 2021

Reviewer, JMLR 2021

Reviewer, AISTATS 2020

Mentor for UCSD Graduate Women in Computing (Fall 2020 – Winter 2021).

Geometry teacher for MISE foundation (Winter – Summer 2021).

## HONORS AND AWARDS

Honorable Mention on the William Lowell Putnam Examination 2012, 2013.

9th place individual nationally in American Regional Mathematics Competition.

Participant of the Math Olympiad Summer Program, 2010.

USAMO qualifier 2009–2012 (ranked 26th in nation in 2012).

## TALKS

“How to Safely Discard Features Based on Aggregate SHAP Values.” COLT 2025.

“Robust Empirical Risk Minimization with Tolerance.” ALT 2023.

“Online  $k$ -means Clustering on Arbitrary Data Streams.” ALT 2023.

“Learning What to Remember.” ALT 2022.

“No-substitution  $k$ -means Clustering with Adversarial Order.” ALT 2021.

“When are Non-Parametric Methods Robust?” ICML 2020.

“What Relations are Reliably Embeddable in Euclidean Space?” ALT 2020.

“No-substitution  $k$ -means Clustering with Adversarial Order.” Algorithmic Learning Theory, Spring

2021.

“No-substitution  $k$ -means Clustering with Adversarial Order.” UCSD Theory Group, Winter 2021.

“When are Non-Parametric Methods Robust?” International Conference on Machine Learning, Summer 2020.

“What Relations are Reliably Embeddable in Euclidean Space?” Algorithmic Learning Theory, Winter 2020.

“Basics of Information Theory.” San Diego Math Circle, Fall 2020.

“What Relations are Reliably Embeddable in Euclidean Space?” SoCalML, Spring 2019.