

Sandesh Adhikary

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[sandeshadhikary.github.io](https://github.com/sandeshadhikary)

Education

- Sept 2019–Present **PhD Candidate**, *Computer Science and Engineering, University of Washington.*
- Aug 2017–Sept 2019 **PhD Student**, *Computational Science and Engineering, Georgia Tech.*
- Aug 2011–May 2015 **Bachelors of Arts**, *Physics, Reed College*,
Honors: Phi Beta Kappa, Academic Commendation (2012, 2013, 2015) .

Research

- 2020–Present **Geometry-Aware Sampling with Kernel Herding**
Extended the kernel herding algorithm to the task of drawing samples from probability distributions over data-spaces corresponding to various structured Riemannian manifolds routinely encountered in robotics.
- Publications* **Adhikary, S.**, Thompson, J., and Boots, B., (2021). [Sampling over Riemannian Manifolds with Kernel Herding](#). Robotics: Science and Systems (R:SS) Workshop on Geometry and Topology in Robotics.
Honors: Awarded Best Workshop Paper
- 2019–Present **Quantum-Inspired Probabilistic Modeling**
Established formal equivalencies between Hidden Quantum Markov Models (HQMMs), a quantum-inspired probabilistic model for sequential data, and well-known models in classical stochastic processes, weighted automata, and uniform quantum tensor networks. Additionally, developed a new approach to learning HQMMs that exploits its parameterization on the Stiefel manifold.
- Publications* **Adhikary S.***, Srinivasan S.*, Miller J., Rabusseau G., & Boots B. (2021) [Quantum Tensor Networks, Stochastic Processes, & Weighted Automata](#). International Conference on Artificial Intelligence and Statistics (AISTATS).
Adhikary, S.*, Srinivasan, S.*, Gordon, G. & Boots, B. (2020) [Expressiveness and Learning of Hidden Quantum Markov Models](#). International Conference on Artificial Intelligence and Statistics (AISTATS).
- 2017–2019 **Predicting Post-transplant Outcomes in Renal Transplant Patients**
Collaborated with clinical experts to develop machine learning models predicting transplant failures, readmissions, and mortality in renal transplant patients.
- Publications* Hogan, J., Arenson, M. D., **Adhikary, S.**, Li, K., Zhang, X., Zhang, R., Valdez, J. N., Lynch, R. J., Sun, J., Adams, A. B., & Patzer, R. E. (2019). [Assessing Predictors of Early and Late Hospital Readmission After Kidney Transplantation](#). Transplantation Direct 5(8)

Teaching

- Oct 2020–Dec 2020 **Teaching Assistant** *CSE599: Reinforcement Learning*, University of Washington
- Dec 2018–May 2019 **Teaching Assistant** *CS4002: Robots and Society*, Georgia Tech.
- Aug 2017–Dec 2017 **Teaching Assistant** *CS4001: Computing, Society, and Ethics*, Georgia Tech.

Work

- Oct 2015–Jan 2017 **Marketing Specialist**, Adpearance, Inc., Portland, OR
Implemented search engine optimization strategies for client websites.
- Aug–Oct 2015 **Customer Experience Analyst**, Interaction Metrics, Portland, OR
Analyzed data to ascertain customer satisfaction and engagement in interactions with clients' customer service representatives.