Sandesh Adhikary

📞 503-317-2104
✉ adhikary@cs.washington.edu
🖥 sandeshadhikary.github.io

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 Srinivasan, S., **Adhikary, S.**, Miller, J., Pokharel, B., Gordon, G. & Boots, B. (2020), *Towards a Trace-Preserving Tensor Network Representation of Quantum Channels*. Second Workshop on Quantum Tensor Networks, NeurIPS 2021

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.