

Ramansh Sharma

CONTACT INFORMATION	72 Central Campus Dr WEB 2883 Salt Lake City, UT 84112 USA	<i>Voice:</i> (801) 414-6734 <i>E-mail:</i> ramansh@cs.utah.edu <i>url:</i> https://rsmath.github.io
RESEARCH INTERESTS	Neural operator architectures (DeepONet, FNO, Kernels) for operator learning and physics-informed learning for scientific machine learning.	
EDUCATION	University of Utah , Salt Lake City, Utah USA, 2023-2028 (expected) Ph.D. in Computing Advisor: Varun Shankar GPA: 3.8/4 SRM University , Chennai, Tamil Nadu India, 2019-2023 Bachelors of Technology, Computer Science and Engineering GPA: 9.7/10	
HONORS AND AWARDS	<ul style="list-style-type: none">• NeurIPS Scholar Award, 2022• NeurIPS Travel Award, 2022• Graduated first class with distinction from SRM University, 2023	
ACADEMIC EXPERIENCE	University of Utah , Salt Lake City, UT USA <i>Graduate Student</i> August, 2023 - present Ongoing Ph.D. research on operator learning methodologies for scientific machine learning applications. <i>Teaching Assistant</i> August, 2024 - December 2024 CS 4230/6230 (Parallel and High-Performance Computing)	
PUBLICATIONS	Google Scholar - https://scholar.google.com/citations?hl=en&user=lUmqHckAAAAJ <ol style="list-style-type: none">1. Ramansh Sharma and Varun Shankar. Ensemble and Mixture-of-Experts DeepONets For Operator Learning (Preprint).2. Ramansh Sharma and Varun Shankar. Accelerated Training of Physics Informed Neural Networks (PINNs) using Meshless Discretizations (NeurIPS, 2022).3. Jordi Planas, Daniel F. Quevedo, Galina Naydenova, Ramansh Sharma, Cristina Taylor, Kathleen Buckingham, and Rong Fang. Beyond modeling: NLP Pipeline for efficient environmental policy analysis (KDD, 2021).	
SERVICE	Vice-President of Graduate Student Advisory Committee.	
PROFESSIONAL EXPERIENCE	Approximate Bayesian Inference team, RIKEN <i>Remote Collaborator</i> October, 2021 - June, 2023 Research focusing on curriculum learning and its advantages over independent and identically distributed (i.i.d.) training. Implemented and executed comprehensive experiments with memorability metrics such as residual and leverage scores . Presented technical reports with the methodology and results to the team.	

World Resources Institute

Machine Learning Engineer

February, 2021 - September, 2021

Identifying economic and financial incentives for forest and landscape restoration using Natural Language Processing. Implemented custom **early stopping** features for **sentence transformers**. Led the experiments and discussion around the reproducibility issue in policy instrument **binary/multiclass classification** with **Sentence-BERT**. Presented our team's paper, *Beyond modeling: NLP Pipeline for efficient environmental Policy Analysis*, at ACM's annual KDD conference at the Fragile Earth workshop.

Omdena

Machine Learning Engineer

August, 2020 - September, 2020

Analyzed the environmental, geographic, geospatial, and socio-economic factors that contributed to illegal dumpsites around the world. Led the ML team through modeling, iterating, and refining classifiers to predict illegal dumpsites based on environmental, geographic, geospatial, and socio-economic factors factors such as population, population density, distance to roads, venue categories, and distance to venue categories.

GRADUATE COURSEWORK

1. Scientific Computing I
2. Scientific Computing II
3. Probabilistic Machine Learning
4. High Performance & Parallel Computing

COMPUTER SKILLS

- Languages: Python (**7 years** experience), Matlab (Octave), C++, Java, Javascript.
- Parallel Programming: CUDA, MPI, OpenMP.
- Machine Learning: PyTorch, Jax, Haiku, Optax, CuPy, TensorFlow.
- Technologies: Weights&Biases, Flask, Heroku, Docker, FastAPI.