Aravinth Krishnan Ravi

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Education

Kansas State University — Manhattan, KS
PhD in Mathematics (Advisor: Dinh-Liem Nguyen) — June 2027
Research Interests: Deep learning methods to solve inverse problems

Nanyang Technology University — Singapore
Bachelor of Science (Honours with Distinction) in Mathematical Sciences (Pure Mathematics) — June 2022
Advisor: Andrew James Kricker

Experience

Kansas State University — Manhattan, KS
Graduate Research Assistant — Jan 2025 – Current
- Applied variational and conditional autoencoders networks to recover atomic positions from its final trajectories using experimental data with 99.3% accuracy

Nanyang Technological University — Singapore
Researcher — May 2022 – July 2022
- Implemented a high-performance OOP Python algorithm for large-scale eigenvalue computations to test a conjecture in low-dimensional topology

Institute for Infocomm Research, (A*STAR) — Remote
Machine Learning Intern — July 2021 – Dec 2021
- Designed and deployed predictive regression models to forecast asset lifetimes, reducing maintenance downtime and decreasing costs by 15%

Publications

In Preparation

- A. Ghanaatian, **Aravinth K. Ravi**, D. Caragea, N. Albin, and D. Rolles - Neural Network Based Molecular Structure Retrieval from Coulomb Explosion Imaging Data, 2025

Skills

Technical: Matlab, Python (Tensorflow, PyTorch NumPy, scikit-learn, Pandas, SciPy)
Language: English (Fluent)