Arvind Rathnashyam

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https://caped-doshi.github.io

OBJECTIVE	A research position in applied mathematics. My research interests are in learning theory, optimization, and random matrix theory.

EDUCATION

Rensselaer Polytechnic Institute — Troy, NY

Bachelor of Science in Mathematical Sciences (GPA 4.0/4.0)   *Expected Summer 2024*

Relevant Coursework: Probability Theory, Numerical Linear Algebra, Linear Algebra, Machine Learning and Optimization, Foundations of Analysis, Introduction to Complex Variables, Machine Learning for Autonomous Systems.

RESEARCH EXPERIENCE

Computer Science Department, RPI — Troy, NY

Undergraduate Researcher   *Fall 2022 - Fall 2023*

- Developed novel algorithms to classify tree graphs utilizing Markov Chains with Professor Malik Magdon-Ismail and Professor Radoslav Ivanov.

Computer Science Department, RPI — Troy, NY

Undergraduate Researcher   *Summer 2023 - Spring 2024*

- Develop theory for Robust Kernel Learning by Subquantile Minimization by studying a novel minimax formulation of robust learning solved by gradient descent with Professor Alex Gittens.

Cornell University Research Experiences for Undergraduates — Ithaca, NY

Undergraduate Researcher   *Summer 2023*

- Develop theory for Optimal Function Probing with a Bayesian Framework in the Data-Driven Discovery of Green's Functions with Christopher Wang and Professor Alex Townsend.

POSTERS

Rensselaer Polytechnic Institute Undergraduate Research Fair   *April 2023*

AWARDS

Rensselaer Leadership Award   *Fall 2021-Spring 2025*

COMAP MCM Honorable Mention (Top 22% of 8011 Teams)   *May 2023*

Cornell REU   *Summer 2023*

INDUSTRY EXPERIENCE

Huntington Ingalls Industries, Technical Solutions Division — Hanover, MD

Software Engineer Intern   *Summer 2022*

- Software Implementation of Signal and Track Processing, Applied Mathematics, and Visualization in C, Java, and Python in a Linux Environment.
- Updated Magnetic Declination Equations to decrease error to 0.1% leading to more precise course directions.

SKILLS

Highly Experienced: MATLAB, Python, LaTeX, Pytorch, Proof Writing

Experienced: C++, C, Java, Linux environment