Nikhil Devanathan

ndevanathan.github.io • nikhil.devanathan@gmail.com • linkedin.com/in/ndevanathan/

Experience

AI Labs Researcher
AI Labs, BlackRock, *Jul 2024–present*
Leveraging AI research to develop protoype solutions for challenges across the firm
- Employing optimization to ensure regulatory compliance of salary structures
- Developing a tool to quantify and manage operational risks associated with portfolio management
- Utilizing statistical tools to predict the net asset value of an illiquid asset

Student Researcher
Prof. Stephen Boyd's Research Group, Electrical Engineering, Stanford University, *Jun 2022–Jun 2024*
Optimization research with Prof. Stephen Boyd
- Researched algorithms for convex optimization

AI Labs Intern
AI Labs, BlackRock, *Jun 2023–Mar 2024*
AI research and development to support portfolio management
- Prototyped tools for reducing risk for multi-asset-class portfolios
- Implemented and tested optimization-based policies for order execution

Technical Intern
Chemical and Biological Signatures Group, Pacific Northwest National Laboratory, *Jun–Aug 2021*
Particle simulation optimization
- Optimized gas molecule collision simulation code to run 140x faster on high-performance computers

Education

M.S. Electrical Engineering **3.9 GPA**
Stanford University, *Sep 2022–Jun 2024*

B.S. Math **3.9 GPA**
Stanford University, *Sep 2020–Jun 2024*

Teaching

Teaching Assistant
EE 104 (CME 107), Introduction to Machine Learning, Stanford University *Mar–Jun 2024*

Teaching Assistant
EE 364A (CME 364A), Convex Optimization I, Stanford University *Jan–Mar 2023*

Teaching Assistant
EE 263 (CME 263), Linear Dynamical Systems, Stanford University *Sep–Dec 2022*

Publications

2024
- Efficient Shapley Performance Attribution for Least-Squares Regression, *Statistics and Computing*
- Polyak Minorant Method for Convex Optimization, *Journal of Optimization Theory and Applications*

2023
- The Role of Ion Rotation in Ion Mobility: Ultrahigh-Precision Prediction of Ion Mobility Dependence on Ion Mass Distribution and Translational to Rotational Energy Transfer, *The Journal of Physical Chemistry A*