

# Darian Nwankwo | Curriculum Vitae

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- I am interested in the mathematical foundations of machine learning and AI and its application to scientific domains.
- **Research Interests:** Bayesian Optimization ◊ Machine Learning ◊ Artificial Intelligence ◊ Scientific Computing ◊ High-Performance Computing

## Professional Experience

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- **Scientific Machine Learning Research Intern** **Austin, TX**  
*AMD Research* *May 2022–December 2022*  
Project 1: Integrating Machine Learning in High-Performance Computing applications to reduce communication  
Project 2: Developing Scalable and Heterogeneous Accelerator Programming Environments for ML in High-Performance Computing Applications
- **Graduate Student Researcher** **Ithaca, NY**  
*Cornell University* *August 2018–Present*  
Thesis Topic: Algorithms for Multi-step Look-ahead Bayesian Optimization
- **Analog AI Research Intern** **San Jose, CA**  
*IBM Research* *May 2021–August 2021*  
Project: Making the (Data-)Trains Run on Time: Towards Local Control of 2D-Mesh Routing for Analog AI
- **Dialog Systems, NLP and Automatic Speech Recognition Intern** **Ithaca, NY**  
*Adobe Research* *May 2018–August 2018*  
Project: Integrating voice and gesture commands to manipulate 2D images.

## Education

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- **Cornell University** **Ithaca, NY**  
*PhD in Computer Science* *2018–Ongoing*  
Advisor: David Bindel
- **Cornell University** **Ithaca, NY**  
*MSc in Computer Science* *2022*  
Advisor: David Bindel
- **Morehouse College** **Atlanta, GA**  
*BS in Computer Science* *2018*  
Advisor: Shelby Wilson

## Patents, Publications & Presentations.....

- **UQ Methods for ML-based Surrogate Models of Scientific Applications** **Abstract**  
*NeurIPS 2022 Workshop Machine Learning and the Physical Sciences* *2022*  
Basu, K., Hao, J., Hintz, D., Shah, D., Palmer, A., Hora, G., Nwankwo, D., White, L.
- **Artificial Intelligence Method for Accelerating Physics Simulations** **Abstract**  
*Pending Patent* *2022*  
Hora, G., Nwankwo, D., White, L.
- **Strategies for Non-myopic Bayesian Optimization** **Abstract**  
*INFORMS 2022 Annual Meeting, Flash Paper* *2022*  
Nwankwo, D., Bindel, D.

Select Awards and Honors.....

- **RTG: Dynamics, Probability, and Partial Differential Equations in Pure and Applied Math**  
Cornell University *Spring 2021*
- **National GEM Consortium Fellowship**  
Cornell University *Fall 2018 – Spring 2019*

## Technical and Professional Development

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Technical Skills.....

- **Programming Languages:** Proficient in: C++, Julia, Python. Intermediate in: R, Matlab, JavaScript, Bash.

Professional Development.....

- **Alan Alda Center for Communicating Science** Mathematics Communication Workshop with Alda Center