

Education

UC San Diego, La Jolla, CA 2021

PhD Student, Computer Science, *Jacobs School of Engineering Fellowship*

Advisor: Ravi Ramamoorthi

Williams College, Williamstown, MA 2017 – 2021

Bachelor of Arts in Computer Science and Mathematics, *Magna Cum Laude*

GPA: 3.94

University of Oxford, Oxford, UK 2019 – 2020

Williams Exeter Programme at Oxford

GPA: 4.0

The Hotchkiss School, Lakeville, CT 2015 - 2017

Cum Laude

Publications

A. Trevithick, and B. Yang, “GRF: Learning a General Radiance Field for 3D Scene Representation and Rendering,” ICCV, 2021

Featured: [NeRF Explosion](#), [AI Times](#)

Research Interests

Computer Vision, 3D Reconstruction, Neural Rendering, Theory of Deep Learning, Implicit Neural Representations

Research Experience

Research Intern – Max Planck Institute for Informatics May – September 2021

- Research neural rendering in Graphics, Vision, and Video Group under Christian Theobalt

Summer Research Fellow – Williams College 2020

- Researched [implicit representations](#) and Neural Tangent Kernel of MLPs with periodic activations

Wilmers Fellow – University of Oxford 2020

- Researched generalization in neural scene representations with Bo Yang
- [Extended neural radiance fields](#) to synthesize novel views from sparse inputs and predict novel scene representations in a single forward pass

REU Researcher – Washington State University	2019
High School Honors Science Program – Michigan State University	2016

Technical Skills

Python, TensorFlow, Jax, CUDA, Java, C, SQL

Awards

2021	Jacobs School of Engineering Fellowship from UC San Diego
2021	Elected to Phi Beta Kappa and Sigma Xi at Williams College
2020	Robert G. Wilmers, Jr. 1990 Fellowship
2020	Williams College Summer Research Fellowship
2019	John Houghton Harris Memorial Scholarship
2018	Alumni-Sponsored Internship Program Grant
2017	Amherst College Schupf Research Scholarship for \$20,000 (nominated)

Teaching Experience

Teaching Assistant in Measure Theory & Hilbert Spaces – Williams College	2020
– Hold seven review sessions per week to present solutions to hardest problems	
Teaching Assistant in Introduction to Computer Science – Williams College	2019
– Administer Python programming lab help for seven hours per week and grade student labs	
Teaching Assistant in Computational Linear Algebra – Williams College	2018
– Grade problem sets in R and hold weekly help session	

Industry Experience

Data Analyst Intern – Haystack Search, Brooklyn, NY	2018
– Cleaned and analyzed data with SQL for predictive analytics and hyperlocal product search	

Projects

Image Regression with Periodic Activations and Neural Tangents (Code)	2020
– Proposed a novel implicit neural representation architecture, SINONE	
– Showed simple architecture performs on par with the Fourier positional embedding in both theory and in practice in the task of image regression	
ChessAI (Code)	2020

- Implemented alpha-beta pruning with quiescence search for arbitrary two-player games and constructed a novel chess heuristic for automated chess playing

References

- Bo Yang, Assistant Professor at The Hong Kong Polytechnic University, bo.yang@cs.ox.ac.uk
- Cesar Silva, Hagey Family Professor of Mathematics at Williams College, csilva@williams.edu
- Leo Goldmakher, Assistant Professor at Williams College, leo.goldmakher@williams.edu