

NHI NGUYEN

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EDUCATION

New York University

PhD Student in Computer Science

Advisors: Rajesh Ranganath

New York, NY

Sep 2023 - Present

Yale University

Master of Science in Computer Science

Bachelor of Science, Summa Cum Laude, Honors in Computer Science, Honors in Applied Mathematics

New Haven, CT

Aug 2019 - May 2023

PUBLICATIONS

Conference

- Aahlad Puli, **Nhi Nguyen**, Rajesh Ranganath. *Explanations that reveal all through the definition of encoding*. NeurIPS, 2024.

Workshop

- Kincaid MacDonald, Dhananjay Bhaskar, Guy Thampakkul, **Nhi Nguyen**, Joia Zhang, Tesfa Asmara, Michael Perlmutter, Ian Adelstein, Smita Krishnaswamy. *A Flow Artist for Embedding High-Dimensional Cellular Data within Vector Fields*. MLSP, 2023.

ADDITIONAL RESEARCH EXPERIENCE

Van Dijk Lab at Yale | Advisor: David van Dijk

Undergraduate Thesis: Graph Attention Message Passing

New Haven, CT

Feb 2023 - May 2023

- Developed a novel graph neural network layer combining ideas from graph convolution and self-attention

Van Dijk Lab at Yale | Advisor: David van Dijk

Undergraduate Thesis: Attention as Message Passing for Graph Neural Networks

New Haven, CT

Sep 2022 - Dec 2022

- Implemented and evaluated a novel graph neural network that can learn feature-level interactions

Summer Undergraduate Math Research at Yale | Advisor: Smita Krishnaswamy

Project: Embedding High-Dimensional Cellular Data within Vector Fields

New Haven, CT

Jun 2022 - Sep 2022

- Developed a new graph neural network to embed directed graphs using a novel directed diffusion operation

Tietjen Lab, Team Next Gen Research Assistantship | Advisor: Gregory Tietjen

Project: Cluster protein activities in donated kidneys

New Haven, CT

Nov 2021 - Jun 2022

- Studied computational methods to cluster proteins with similar ontology and activities in donated kidneys

Analyze orders in soccer penalty shootouts | Advisor: Nils Rudi

Tobin Undergraduate Research Assistantship

Yale University, Online

Feb 2021 - Aug 2021

- Analyzed and quantified the advantages of shootout orders using base statistical tests

WORK EXPERIENCE

VinAI Research | Advisor: Toan Tran

Research Intern

Hanoi, Viet Nam

Jun 2023 - Aug 2023

- Extracted features and trained models to detect drunk driving in real-time

VNPT Technology

Software Engineering Intern

Hanoi, Viet Nam

Jun 2021 - Aug 2021

- Developed an internal telecom monitoring system for Mobifone to transition to a new payment system

VietAbroad School Compass

Data cum Product Specialist

- Analyzed data and structured a ranking system of colleges/universities in the US for Vietnamese students

Viet Nam, Online

Jul 2020 - Dec 2020

TEACHING ASSISTANT

Yale University Department of Computer Science

New Haven, CT

Undergraduate Learning Assistant, Grader

Aug 2021 - May 2023

- CPSC 452/552: Deep Learning Theory and Applications. Prof. Smita Krishnaswamy Spring 2023
- CPSC 477/577: Natural Language Processing. Prof. Dragomir Radev Spring 2023
- CPSC 366: Intensive Algorithms. Prof. Dan Spielman Spring 2022
- CPSC 327: Object-Oriented Programming. Prof. Timothy Barron Fall 2021

Yale University Department of Statistics

New Haven, CT

Undergraduate Learning Assistant, Grader

Aug 2020 - May 2023

- S&DS 351/551: Stochastic Processes. Prof. Amin Karbasi Spring 2023
- S&DS 431/631: Optimization and Computation. Prof. Yang Zhuoran Fall 2022
- S&DS 230/530: Data Exploration and Analysis. Prof. Jonathan Reuning-Scherer Spring 2021
- S&DS 238/538: Probability and Statistics. Prof. Joseph Chang Fall 2020

Yale University Department of Mathematics

New Haven, CT

Undergraduate Learning Assistant, Grader

Aug 2020 - Dec 2022

- MATH 332/532: Geometric and Topological Methods in Machine Learning Fall 2022
- MATH 244: Discrete Mathematics. Prof. Richard Kenyon; Prof. Andrei Pohoata Fall - Spring 2021
- MATH 118: Introduction to Functions of Several Variables. Prof. Itziar Ochoa de Alaiza Gracia Fall 2020
- MATH 230: Vector Calculus and Linear Algebra I Fall 2020
- MATH 222: Linear Algebra with Applications Spring 2020

Yale University Department of Economics

New Haven, CT

Undergraduate Learning Assistant

Aug 2020 - Dec 2020

- ECON 121: Intermediate Microeconomics. Prof. Mira Frick Fall 2020

HONORS

Graduate

New York, NY

- DeepMind scholarship, Department of Computer Science 2023

Undergraduate

New Haven, CT

- Russell Henry Chittenden Prize for senior majoring in the natural sciences 2023
- Trumbull College Student Marshals, Trumbull College 2023
- Phi Beta Kappa Junior Inductee 2022

SKILLS

- Programming proficiency: Python, Git/GitHub, R, MATLAB, Javascript, HTML/CSS
- Libraries/Frameworks: PyTorch, PyTorch Geometric, Scikit-learn, Numpy, Matplotlib