

NHI NGUYEN

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EDUCATION

New York University

PhD Candidate in Computer Science

Advisors: Rajesh Ranganath, Oded Regev

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

HONORS

Graduate

- DeepMind scholarship, Department of Computer Science

New York, NY

2023

Undergraduate

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

New Haven, CT

2023

2023

2022

PUBLICATIONS

Workshops

- 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.

Preprint

- Syed Asad Rizvi, **Nhi Nguyen**, Haoran Lyu, Benjamin Christensen, Josue Ortega Caro, Antonio H. O. Fonseca, Emanuele Zappala, Maryam Bagherian, Christopher Averill, Chadi G. Abdallah, Rex Ying, Maria Brbic, Rahul Madhav Dhodapkar, David van Dijk. *AMPNet: Attention as Message Passing for Graph Neural Networks*. arXiv, 2022.

ADDITIONAL RESEARCH EXPERIENCE

Van Dijk Lab at Yale | Advisor: David van Dijk

Undergraduate Thesis: Graph Attention Message Passing

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

New Haven, CT

Feb 2023 - May 2023

Van Dijk Lab at Yale | Advisor: David van Dijk

Undergraduate Thesis: Attention as Message Passing for Graph Neural Networks

Advisor: David van Dijk

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

New Haven, CT

Sep 2022 - Dec 2022

Summer Undergraduate Math Research at Yale | Advisor: Smita Krishnaswamy

Project: Embedding High-Dimensional Cellular Data within Vector Fields

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

New Haven, CT

Jun 2022 - Sep 2022

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

Project: Cluster protein activities in donated kidneys

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

New Haven, CT

Nov 2021 - Jun 2022

Analyze orders in soccer penalty shootouts | Advisor: Nils Rudi **Yale University, Online**
Feb 2021 - Aug 2021
Tobin Undergraduate Research Assistantship

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

Polymath Research Experience for Undergraduate | Advisor: Steven Miller **Williams College, Online**
Jun 2020 - Aug 2020
Project: The Fibonacci numbers and the Zeckendorf game

- Proved the existence of and developed winning strategies for some variations of the Zeckendorf game

TEACHING ASSISTANT

Yale University Department of Computer Science **New Haven, CT**
Undergraduate Learning Assistant 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 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

SKILLS

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

WORK EXPERIENCE

VinAI Research | Advisor: Toan Tran **Hanoi, Viet Nam**
Research Intern Jun 2023 - Aug 2023

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

VNPT Technology **Hanoi, Viet Nam**
Software Engineering Intern Jun 2021 - Aug 2021

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

VietAbroad School Compass **Viet Nam, Online**
Data cum Product Specialist Jul 2020 - Dec 2020

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