

Peter Hase

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EDUCATION

The University of North Carolina at Chapel Hill

First-year PhD student in Computer Science

Research Area: Natural Language Processing | Advisor: [Mohit Bansal](#)

Fall 2019 – Present

Chapel Hill, NC

Duke University

BS in Statistical Science | Minor in Mathematics

Fall 2015 – Spring 2019

Durham, NC

RESEARCH INTERESTS

Interpretable and explainable machine learning, natural language processing (NLP), connections between NLP and reinforcement learning, AI safety.

PUBLICATIONS

Interpretable Image Recognition with Hierarchical Prototypes

In AAAI-HCOMP 2019. (25% acceptance rate) [[pdf](#)]

Peter Hase, Chaofan Chen, Oscar Li, Cynthia Rudin

Shall I Compare Thee to a Machine-Written Sonnet? An Approach to Algorithmic Sonnet Generation

Preprint on arXiv. [[pdf](#)]

John Benhardt, Tianlin Duan, Peter Hase, Liuyi Zhu, Cynthia Rudin

AWARDS

William R. Kenan Jr. (Royster) Fellowship, UNC Chapel Hill

Five-year fellowship awarded to one student in the 2019 cohort of Computer Science graduate students

2019

First Prize in the PoetiX Literary Turing Test, Neukom Institute, Dartmouth College

Awarded for the top submission to the Neukom Institute's open competition for algorithmic sonnet generation

2018

Nomination for Undergrad TA of the Year, Dept. of Statistical Science, Duke University

One of five undergrad nominations from faculty for the department's TA of the year award

2018

ASA DataFest Honorable Mention, Dept. of Statistical Science, Duke University

Recognition for performance in a Duke-hosted data analysis competition for undergrad and grad students

2018

Meritorious Winner in the Mathematical Contest in Modeling, COMAP

Awarded for placement in the top 12% of over 8000 teams in the international modeling contest held by the Consortium for Mathematics and its Applications

2017

AJ Tannenbaum Trinity Scholarship, Duke University

A full academic merit scholarship awarded to one student from Guilford County, NC

2015

TEACHING	Probabilistic Machine Learning (Graduate) , Teaching Assistant Dept. of Statistical Science, Duke University	<i>Spring 2019</i>
	Intro to AI , Teaching Assistant Dept. of Computer Science, Duke University	<i>Spring 2019</i>
	Elements of Machine Learning , Teaching Assistant Dept. of Computer Science, Duke University	<i>Fall 2018</i>
	Intro to Data Science , Teaching Assistant Dept. of Statistical Science, Duke University	<i>Spring 2018</i>
	Regression Analysis , Teaching Assistant Dept. of Statistical Science, Duke University	<i>Fall 2017</i>
RESEARCH EXPERIENCE	Department of Statistical Science, Duke University DOmath Researcher <i>Supervisor</i> : Dr. Sayan Mukherjee	<i>Summer 2018</i> <i>Durham, NC</i>
	<ul style="list-style-type: none"> Numerically estimated a measure of model complexity, the topological entropy, for two dynamical systems, the logistic map and linear dynamical system Assessed how the reliability of inference for the linear dynamical system varies as a function of its entropy 	
	Department of Neurobiology, Duke University Research Assistant <i>Supervisor</i> : Dr. Jeff Beck	<i>Spring & Summer 2018</i> <i>Durham, NC</i>
	<ul style="list-style-type: none"> Implemented a hidden Markov model and linear dynamical system, each learned through variational Bayesian expectation maximization (VBEM) Modeled recordings of neuron activity in the actively singing Zebra finch; visualized and interpreted models' latent variable dynamics 	
	Information Initiative at Duke Data+ Researcher <i>Supervisor</i> : Sheng Jiang	<i>Summer 2017</i> <i>Durham, NC</i>
	<ul style="list-style-type: none"> Clustered Duke's alumni donors into groups with distinct giving behaviors via k-means Built logistic regression models to evaluate donors' philanthropic potential based on demographics and prior giving behavior 	
WORK EXPERIENCE	Clarity Campaign Labs Research Analyst	<i>Summer 2016</i> <i>Washington, DC</i>
	<ul style="list-style-type: none"> Visualized model predictions and political data; encoded surveys; drafted software guides for internal use 	
LEADERSHIP	Effective Altruism: Duke Co-President	<i>Fall 2016 – Spring 2019</i> <i>Durham, NC</i>
	<ul style="list-style-type: none"> Moderated weekly discussions and activities related to Effective Altruism, the social movement promoting the use of reason and evidence to maximize impact in charity Led club from 9 to 28 active members over my tenure Recorded over 15 Giving What We Can pledges (10% of all future income) in pledge drives since 2015 	