Peter Hase

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EDUCATION	**The University of North Carolina at Chapel Hill**	*Fall 2019 – Present*
	First-year PhD student in Computer Science	*Chapel Hill, NC*
	Research Area: Natural Language Processing	*Advisor:* Mohit Bansal	

Duke University — *Fall 2015 – Spring 2019*
BS in Statistical Science | Minor in Mathematics — *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 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 — *2019*
Five-year fellowship awarded to one student in the 2019 cohort of Computer Science graduate students

First Prize in the PoetiX Literary Turing Test, Neukom Institute, Dartmouth College — *2018*
Awarded for the top submission to the Neukom Institute's open competition for algorithmic sonnet generation

Nomination for Undergrad TA of the Year, Dept. of Statistical Science, Duke University — *2018*
One of five undergrad nominations from faculty for the department's TA of the year award

ASA DataFest Honorable Mention, Dept. of Statistical Science, Duke University — *2018*
Recognition for performance in a Duke-hosted data analysis competition for undergrad and grad students

Meritorious Winner in the Mathematical Contest in Modeling, COMAP — *2017*
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

AJ Tannenbaum Trinity Scholarship, Duke University — *2015*
A full academic merit scholarship awarded to one student from Guilford County, NC

TEACHING	**Probabilistic Machine Learning (Graduate)**, Teaching Assistant Dept. of Statistical Science, Duke University	*Spring 2019*
	Intro to AI, Teaching Assistant Dept. of Computer Science, Duke University	*Spring 2019*
	Elements of Machine Learning, Teaching Assistant Dept. of Computer Science, Duke University	*Fall 2018*
	Intro to Data Science, Teaching Assistant Dept. of Statistical Science, Duke University	*Spring 2018*
	Regression Analysis, Teaching Assistant Dept. of Statistical Science, Duke University	*Fall 2017*

RESEARCH EXPERIENCE	**Department of Statistical Science, Duke University** DOmath Researcher | *Supervisor:* Dr. Sayan Mukherjee	*Summer 2018* *Durham, NC*

- 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**   *Spring & Summer 2018*
Research Assistant \| *Supervisor:* Dr. Jeff Beck   *Durham, NC*

- 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   *Summer 2017*
Data+ Researcher \| *Supervisor:* Sheng Jiang   *Durham, NC*

- 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	*Summer 2016* *Washington, DC*

- Visualized model predictions and political data; encoded surveys; drafted software guides for internal use

LEADERSHIP	**Effective Altruism: Duke** Co-President	*Fall 2016 – Spring 2019* *Durham, NC*

- 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