



## EDUCATION

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<b>University of Edinburgh</b> <i>Ph.D. Informatics</i> Supervisors: Adam Lopez and Tim Hospedales	2021
<b>Johns Hopkins University</b> <i>MSE Computer Science</i>	2015
<b>Carnegie Mellon University</b> <i>B.Sc Computer Science with Language Technologies minor</i>	2013
<b>The Recurse Center</b> <i>Sabbatical: Recurser</i> Experimental unstructured educational programming retreat.	Spring 2017

## PUBLICATIONS

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- White, Jennifer C., Tiago Pimentel, Naomi Saphra (equal contribution), Adina Williams, and Ryan Cotterell (2021). “A Non-Linear Structural Probe”. In: *NAACL*.
- Pimentel, Tiago, Naomi Saphra (equal contribution), Adina Williams, and Ryan Cotterell (2020). “Pareto Probing: Trading Off Accuracy for Complexity”. In: *EMNLP*.
- Saphra, Naomi and Adam Lopez (2020). “LSTMs Compose—and Learn—Bottom-Up”. In: *Findings of EMNLP*.
- Tahaei, Mohammad, Kami Vaniea, and Naomi Saphra (2020). “Understanding Privacy-Related Questions on Stack Overflow”. In: *Proceedings of the 2020 CHI Conference on Human Factors in Computing Systems*.
- Saphra, Naomi and Adam Lopez (2019). “Sparsity Emerges Naturally in Neural Language Models”. In: *ICML Workshop on Identifying and Understanding Deep Learning Phenomena*.
- Saphra, Naomi and Adam Lopez (2019). “Understanding Learning Dynamics Of Language Models with SVCCA”. In: *NAACL*.
- Saphra, Naomi and Adam Lopez (2016). “Evaluating Informal-Domain Word Representations With UrbanDictionary”. In: *ACL Workshop on Evaluating Vector Space Representations for NLP*.
- Saphra, Naomi and Raman Arora (2015). “Domain Adaptation for Word Embeddings With Matrix Factorization”. In: *Women in Machine Learning Workshop at NIPS*.
- Saphra, Naomi and Adam Lopez (2015). “AMRICA: an AMR Inspector for Cross-language Alignments”. In: *NAACL*.
- Cotterell, Ryan, Adithya Renduchintala, Naomi Saphra, and Chris Callison-Burch (2014). “An Algerian Arabic-French Code-Switched Corpus”. In: *LREC Workshop on Free/Open-Source Arabic Corpora*.
- Schneider, Nathan, Brendan O’Connor, Naomi Saphra, David Bamman, Manaal Faruqui, Noah A. Smith, Chris Dyer, and Jason Baldridge (2014). “A framework for (under) specifying dependency syntax without overloading annotators”. In: *ACL Linguistic Annotation Workshop*.
- Vedaldi, Andrea et al. (2014). “Understanding Objects in Detail with Fine-grained Attributes.” In: *Proc. IEEE Conf. on Computer Vision and Pattern Recognition (CVPR)*.
- Saphra, Naomi and Matthew Blaschko (2012). “Automatic verification of boundary annotations from mechanical turk”. In: *Women in Machine Learning Workshop at NIPS*.

## SUPERVISION

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*Alp Ozkan, University of Edinburgh MSc. 2018*

Combined Application of Pruning and Growing Approaches for Neural Networks.

*Yekun Chai, University of Edinburgh MSc. 2018*

Discovering Spelling Variants on Urban Dictionary.

## TEACHING

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**University of Edinburgh**

2016-2019

*Tutor*

Informatics Research Review (2016)

Probabilistic Modeling & Reasoning (2019)

Machine Learning & Pattern Recognition (2017, 2018, 2019)

**Johns Hopkins University**

2013

*Course Assistant*

Natural Language Processing

**Irvington High School**

2008-2009

*Teacher's Assistant*

Ancient Greek

## WORK EXPERIENCE

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**NYU**

2021

*Postdoctoral Researcher*

Supervisor: Kyunghyun Cho

**Google**

Winter 2020

*Research Intern*

Supervisors: Dipanjan Das, Ian Tenney, Jasmijn Bastings, Thibault Sellam.

Better understanding of how BERT learns.

**Koko**

Summer 2017

*Contractor*

Developed neural classifiers for informal text at NYC startup.

**Google**

Summer 2015

*Software Engineering Intern*

Supervisor: Marius Pasca (Common Sense Team, Machine Intelligence).

Unsupervised discovery of paraphrases of complex compositional noun phrases.

**Google**

Summer 2013

*Software Engineering Intern*

Supervisor: Eric Altendorf (Common Sense Team, Machine Intelligence).

Integrated models of real-world knowledge into entity linking systems.

**CLSP Summer Workshop at Johns Hopkins University**

Summer 2012

*Undergraduate Research Fellow*

Supervisor: Matthew Blaschko.

Developed unsupervised learning methods to verify and explore image annotations.

Selected from a competitive undergraduate pool.

**Facebook, Inc.**

Summer 2011

*Engineering Intern*

Supervisor: Jen Burge (Engagement Team).

Engineered and tested new features for the People You May Know model.

## AWARDS

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ICLR Outstanding Reviewer 2021.

NY Academy of Sciences - Natural Language, Dialogue, and Speech 2019: Best Poster Runner Up.

Daniella Sciama Award for Achievement through Adversity 2019.

Google Europe Scholarship for Students with Disabilities 2017.

Carnegie Mellon School of Computer Science Dragon Award 2013.

National Merit Semifinalist 2009.

Nannina Rasulo Memorial Scholarship Award for Technology 2009.

## TALKS

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### INVITED EVENT TALKS

**Transparent, Hackable, Accessible**

November 2020

*QueerInAI EMNLP Social*

Seattle, WA (Remote)

**Accessible Means Hackable (Keynote)**

June 2020

*Pydatafest Amsterdam*

Amsterdam, Netherlands (Remote)

**Blackbox NLP Panel Discussion**

August 2019

*ACL Blackbox NLP Workshop*

Florence, Italy

### OUTREACH

**Get Hooked on Pytorch Hooks!**

March 2020

*!!Con West*

Santa Cruz, CA

**Carbon AI and the Concentration of Computational Work**

September 2019

*Challenging the Work Society*

London, UK

**Paying the Panopticon (standup comedy)**

Feb 26, 2019

*The Stand Edinburgh Comedy Club*

Edinburgh, UK

**ML and NLP Guest Lectures**

2012

*Carnegie Mellon TechNights (program for middle school girls)*

Pittsburgh, PA

### OTHER INVITED TALKS

UC Berkeley

November 2020

*Berkeley, CA (Remote)*

NLP With Friends

October 2020

*Remote*

New York University

June 2020

*New York, New York (Remote)*

Brown University

May 2020

*Providence, RI (Remote)*

Element AI

September 2019

*London, UK*

Allen Institute for AI

August 2019

*Seattle, WA*

City University of New York

May 2019

*New York, New York*

University of Amsterdam

January 2019

*Amsterdam, Netherlands*

## SERVICE

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*6th Workshop on Representation Learning for NLP (RepL) 2021*

Organizing Committee.

*Association for Computational Linguistics (ACL) 2020*

Accessibility Subcommittee.

*Radical Utopian Sci-Fi Enclave (RUSE) co-organizer (2019-2020)*

Organize monthly department political sci-fi book club.

*Staff Pride Network disability representative (2019-2020)*

Representative for disabled students in school-wide LGBTQ+ network.

*ILCC Cookie Czar (2017-2019)*

Organize weekly department social event.

*Edinburgh ML4NLP Reading Group (2018-2019)*

Organize and lead weekly reading group.

*Auld Reekie Roller Derby (2018-2019)*

Communications committee.

*Association for Computational Linguistics (ACL) 2014*

Student social co-chair.

*North American Computational Linguistics Olympiad (2012-2014)*

Puzzle tester and local organizer.

## REVIEWING

- Conferences
  - ICLR
  - ACL
  - ICML
  - EMNLP
  - NAACL
  - EACL
  - NeurIPS
- Workshops
  - BlackboxNLP Workshop
  - RepEval NLP Workshop
  - Learning With Limited Data Workshop
  - Women in Machine Learning Workshop
  - Widening NLP Workshop