NAOMI SAPHRA

Natural Language Processing and Machine Learning

@ n.saphra@ed.ac.uk   % www.nsaphra.github.io/   🐦 @nsaphra   ⭘ github.com/nsaphra

RESEARCH EXPERIENCE

Research Assistant
Johns Hopkins University

📅 2013 – 2015   📍 Baltimore, Maryland

- Supervisors: Raman Arora, Adam Lopez, and Sanjeev Khudanpur.
- Work on normalization and representation of informal language text.

Undergraduate Research Assistant
Carnegie Mellon University

📅 2010 – 2013   📍 Pittsburgh, Pennsylvania

- Supervisors: Chris Dyer and Noah Smith.
- Twitter dependency parsing; multithreaded language models; &c.

Undergraduate Research Fellow
CLSP Summer Workshop at Johns Hopkins University

📅 Summer 2012   📍 Baltimore, Maryland

- Supervisor: Matthew Blaschko.
- Developed unsupervised methods to verify image annotations.

INDUSTRY EXPERIENCE

Contractor
Koko

📅 2017   📍 New York, New York

- Developed neural classifiers for informal text at startup.

Software Engineering Intern
Google

📅 Summer 2015   📍 Mountain View, California

- Supervisor: Marius Pasca (Common Sense, Machine Intelligence).
- Unsupervised discovery of paraphrases of compositional noun phrases.

Software Engineering Intern
Google

📅 Summer 2013   📍 Mountain View, California

- Supervisor: Eric Altendorf (Common Sense, Machine Intelligence).
- Integrated models of real-world knowledge into entity linking.

Engineering Intern
Facebook

📅 2011   📍 Palo Alto, California

- Supervisor: Jen Burge (Engagement Team).
- Engineered new features for the People You May Know model.

EDUCATION

Ph.D. in Informatics
Edinburgh University

📅 Ongoing

Supervisor: Adam Lopez.
Thesis: Learning dynamics of neural text models.

M.Sc. in Computer Science
Johns Hopkins University

📅 2015

B.Sc. in Computer Science
Carnegie Mellon University

📅 2013

Minor in Language Technologies
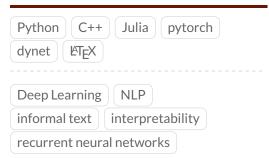
Sabbatical
The Recurse Center

📅 2017

Unstructured programming retreat.

AWARDS

- 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.

SKILLS

Python   C++   Julia   pytorch   dynet   LaTeX

Deep Learning   NLP   informal text   interpretability   recurrent neural networks

SELECTED PUBLICATIONS

👥 Conference Proceedings

- Saphra, Naomi and Adam Lopez (2019). "Understanding Learning Dynamics Of Language Models with SVCCA". in: *NAACL*.
- Saphra, Naomi and Adam Lopez (2015). "AMRICA: an AMR Inspector for Cross-language Alignments". In: *NAACL*.
- Vedaldi, Andrea et al. (2014). "Understanding Objects in Detail with Fine-grained Attributes." In: *Proc. IEEE Conf. on Computer Vision and Pattern Recognition (CVPR)*.

👥 Workshop Proceedings

- 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 Lopez, Adam (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*.
- Cotterell, Ryan et al. (2014). "An Algerian Arabic-French Code-Switched Corpus". In: *LREC Workshop on Free/Open-Source Arabic Corpora*.
- Schneider, Nathan et al. (2014). "A framework for (under) specifying dependency syntax without overloading annotators". In: *ACL Linguistic Annotation Workshop*.
- Saphra, Naomi and Matthew Blaschko (2012). "Automatic verification of boundary annotations from mechanical turk". In: *Women in Machine Learning Workshop at NIPS*.

SERVICE

ILCC Weekly Cookie Social Chair
Edinburgh University
📅 2017 –   📍 Edinburgh, UK

Edinburgh ML4NLP Reading Group Organizer
Edinburgh University
📅 2018 –   📍 Edinburgh, UK

Communications committee
Auld Reekie Roller Derby
📅 2017 –   📍 Edinburgh, UK

Student social co-chair
ACL
📅 2014   📍 Baltimore, Maryland

Puzzle tester and local organizer
North American Computational Linguistics Olympiad
📅 2012 – 2014

TEACHING

Tutor
University of Edinburgh
📅 2016 –

Informatics Research Review
Probabilistic Modeling & Reasoning
Machine Learning & Pattern Recognition

Course Assistant
Johns Hopkins University
📅 2013

Natural Language Processing

Teacher's Assistant
Irvington High School
📅 2008 – 2009

Ancient Greek

INVITED TALKS

Blackbox NLP Panel Discussion
ACL Blackbox NLP Workshop
📅 Aug 1, 2019   📍 Florence, Italy

Learning Dynamics of Language Models
City University of New York
📅 May 28, 2019   📍 New York, New York

Paying the Panopticon (comedy show)
The Stand Edinburgh Comedy Club
📅 Feb 26, 2019   📍 Edinburgh, UK

Learning Dynamics of Text Models With SVCCA
University of Amsterdam
📅 Jan 25, 2019   📍 Amsterdam, Netherlands

REVIEWING SERVICE

- EMNLP
- BlackboxNLP
- RepEval
- Learning With Limited Data
- Women in Machine Learning
- WiNLP