nsaphra@nsaphra.net
http://nsaphra.net

Naomi Saphra

EDUCATION

University of Edinburgh 2021
Ph.D. Informatics
> Supervisors: Adam Lopez and Tim Hospedales
> Thesis: Training Dynamics of Neural Language Models.

Johns Hopkins University 2015
MSE Computer Science

Carnegie Mellon University 2013
B.Sc Computer Science with Language Technologies minor

The Recurse Center Spring 2017
Sabbatical: Recurser
> Experimental unstructured educational programming retreat.

PUBLICATIONS (CONFERENCE)

Sellam, Thibault, Steve Yadlowsky, Ian Tenney, Jason Wei, Naomi Saphra, Alexander D'Amour, Tal Linzen, Jasmijn Bastings, Iulia Raluca Turc, Jacob Eisenstein, Dipanjan Das, and Ellie Pavlick (2022). "The MultiBERTs: BERT Reproductions for Robustness Analysis". In: *ICLR*.

White, Jennifer C., Tiago Pimentel, Naomi Saphra, 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). "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

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 (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, 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*.

Saphra, Naomi and Matthew Blaschko (2012). "Automatic verification of boundary annotations from mechanical turk". In: *Women in Machine Learning Workshop at NIPS*.

AWARDS

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.

SUPERVISION

Sylke Gosen, University of Amsterdam MSc. 2021
>   Understanding Language Models through Perturbed Datasets.

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

NYU   2021
Project Supervisor
>   Center for Data Science Capstone

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

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

WORK EXPERIENCE

Mosaic ML   2022
Consultant
    Advise on making NLP models more efficient.
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.
Carnegie Mellon University   2010-2013
Undergraduate Research Assistant
    Supervisors: Chris Dyer and Noah Smith.
    Projects included tweet dependency parsing; multithreaded language models; political corpus analysis.

SERVICE

Analyzing and interpreting neural networks for NLP (BlackboxNLP) at EMNLP 2022
    Organizing Committee.
ACL 2022
    Session Chair (Interpretability).
EMNLP 2021
    Area Chair (Interpretability).
6th Workshop on Representation Learning for NLP (RepL) at ACL 2021
    Organizing Committee.
Association for Compuational Linguistics (ACL) 2020
    Accessibility Subcomittee.
Radical Utopian Sci-Fi Enclave (RUSE) (2019-2020)
    Co-organized 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 Compuational 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
    - ACL Rolling Review
- Workshops
    - I Can't Believe It's Not Better (NeurIPS Negative Results Workshop)
    - BlackboxNLP Workshop
    - RepEval NLP Workshop
    - Learning With Limited Data Workshop
    - Women in Machine Learning Workshop
    - Widening NLP Workshop

TALKS

INVITED EVENT TALKS

Mathematical Fundamentals of AI   January 2022
NYU AI School
  New York, NY (Remote)

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

OTHER INVITED TALKS

Oracle   July 2022
  Boston, MA

UC Irvine   June 2022
  Irvine, CA

Stanford University   June 2022
  Palo Alto, CA (Remote)

Neural Sequence Models Theory Discord   March 2022
  Remote

University College London   February 2022
  London, UK

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