## Seraphina Goldfarb-Tarrant

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#### **SUMMARY**

- NLP (Natural Language Processing) researcher in: Fairness, Causality, Unsupervised Learning, Natural Language Generation, Information Retrieval, Multilinguality.
- 5 first author NLP publications at top tier conferences, 1 second author
- 4.5 years at Google as a global Product Manager & programmer in adTech. Joined a recently acquired team of five, helped grow the product to \$1 billion annual revenue and 1 million queries-per-second.
- 1.5 years at sea teaching disadvantaged teens teamwork via sailing.

#### **EDUCATION**

# **U. of Edinburgh**, Edinburgh — *PhD Candidate* (Dissertation Phase) in Informatics: Institute for Language, Cognition, and Computation

September 2019 - March 2023 (expected), advised by Adam Lopez

Thesis: Fairness in Transfer Learning.

## U. of Washington, Seattle — MSc in NLP/Computational Linguistics

September 2017 - June 2019, GPA: 3.97

Projects: classification, sequence-tagging, language models, linguistics, parsing, topic models, automatic summarization, information retrieval

## **UCLA**, Los Angeles — BA Ancient Greek, Minor in Film

Grad date: September 2010, GPA 3.98

UCLA Honors Program, summa cum laude, Phi Beta Kappa, 5 scholarships

#### PROFESSIONAL EXPERIENCE

#### **Meta (FAIR),** London — Research Intern

Sept 2022 - Dec 2022

Fairness and Interpretability for Retrieval Augmented QA systems.

## Amazon, Barcelona — Research Intern

August 2021 - Dec 2021

Multilingual transfer learning for sentiment analysis.

### Bayes Centre for DataScience, UK — Consulting NLP Engineer

November 2019 - Dec 2022

In collaboration with the Gates Foundation, created a multilingual event and entity extraction ML system to map the spread of livestock diseases across 12 African countries. Presented at a <u>LD4D</u> conference in Feb 2020.

## **Information Sciences Institute**, LA — *Visiting Researcher*

July 2018 - June 2020

Research in Narrative Generation, Human-AI interaction & DARPA NLP projects. Build novel state-of-the-art systems in PyTorch. Responsible for research experiments & authoring works for publication.

### **Google**, Tokyo, NYC, Shanghai — Product Manager, AdTech

July 2012 - Oct 2015

- Launched main product in AU/NZ, Japan, China by increasing local

#### **Programming Languages**

Fluent: Python & Django Conversational: C++, SQL

#### Natural Languages

**Conversational:** Japanese, Spanish, Ancient Greek

#### Skills

Machine Learning

**Neural Networks** 

Jira, Git, Latex, Balsamiq, Sketch, Alexa Platform

#### PROFESSIONAL SERVICE

Reviewer (2020 - present): ACL, NAACL, EMNLP, ARR

Ethics Committee (2022 – present): *EMNLP*, *EACL* 

#### **AWARDS**

- Apple AI Fellow Nomination (5 students/year)
- First-place Alexa social bot (restaurant-recommender) in Amazon competition

#### **PROJECTS**

#### Interactive NLP

Built an Interactive Neural Story Writing system: <u>video</u>

#### **Human-AI Interfaces**

Collaboration with performance artists to investigate how the public views and interacts with AI systems. First shows premiered in Amsterdam and NYC (2019), in collaboration with the VALES project: link

#### **Excelsior Trust (non-profit)**

Work on *Excelsior*, a historic wooden 23m ship in the North Sea & Baltic, which offers team building for teens & recovering addicts.

Began as a volunteer, subsequently hired as relief Boatswain & First Mate, then elected to the board. 15,000 nautical miles.

## Digital Mapping of the Ancient World

Developed 3D reconstructions of Ancient Rome throughout

partner integrations by 300%, and driving localization and language detection/categorization. Developed the Asia-Pacific region to a revenue growth of 212% YoY (\$11M to \$34M).

- PM for global relationship with Yahoo!; eliminated primary source of on-call incidents.
- PM for global Machine Learning bidding algorithm improvements, influencing 30% of revenue, and for anti-Malware features.

Google, NYC — Technical Account Manager, AdTech

January 2011 - June 2012

- Designed custom solutions in python/django for clients responsible for 40% of product revenue.
- Organised QA (technical and user) for all releases and for migration from Amazon ec2 to Google infrastructure.

time, to integrate a time dimension into Google Earth. As part of the UCLA Experiential Technologies Center, in 2010. (The Google Earth API has now been turned down, but more work done by the same lab can be found here)

#### **PUBLICATIONS**

This Prompt is Measuring <MASK>: Evaluating Bias Evaluation in Language Models Seraphina Goldfarb-Tarrant, Eddie Ungless, Esma Balkir, Su Lin Blodgett

Cross-lingual Transfer Can Worsen Bias in Low-Resource Sentiment Analysis **Seraphina Goldfarb-Tarrant,** Björn Ross, Adam Lopez

Bias Beyond English: Counterfactual Tests for Bias in Sentiment Analysis in Four Languages **Seraphina Goldfarb-Tarrant,** Adam Lopez, Roi Blanco and Diego Marcheggiani

How Gender Debiasing Affects Internal Model Representations, and Why It Matters Hadas Orgad, **Seraphina Goldfarb-Tarrant**, Yonatan Belinkov <u>arXiv link</u>

Intrinsic Bias Metrics Do Not Correlate with Application Bias **Seraphina Goldfarb-Tarrant**, R. Marchant, R. Muñoz Sanchez, Mugdha Pandya, Adam Lopez <u>arXiv link, video link</u>

Content Planning for Neural Story Generation with Aristotelian Rescoring Seraphina Goldfarb-Tarrant, Tuhin Chakrabarty, Ralph Weischedel, Nanyun Peng arXiv link, video link

Scaling Systematic Literature Reviews with Machine Learning Pipelines
Seraphina Goldfarb-Tarrant, A. Robertson, J. Lazic, T. Tsouloufi, L. Donnison, K. Smyth
<a href="mailto:arXiv link">arXiv link</a>

Plan, Write, and Revise: an Interactive System for Open-Domain Story Generation Seraphina Goldfarb-Tarrant, Haining Feng, Nanyun Peng arXiv link, demo video

(Under Submission), ACL

(Under Submission), ARR

(Under Submission), ARR

NAACL 2022

ACL 2021

**EMNLP 2020** 

SDP@EMNLP 2020

NAACL 2019

#### **INVITED TALKS**

#### **Invited Talks:**

- -Interpretability for Retrieval Augmented Generation, Technion Israel Institute of Technology, Jan 2023
- -Bias in Language Model Representations, NYU, September 2022
- Panel talk at Gender Bias in NLP workshop, ACL 2022, with Kai-Wei Chang, Kellie Webster, and Mark Yatskar
- Understanding and Applying Bias Metrics for NLP Systems, National Research Council Canada, March 2022
- Panel talk at Generation, Evaluation, Metrics (GEM), ACL 2021, with Ehud Reiter, He He, and Hady Elsahar
- Interpretability and Reproducibility Workshop, Information Sciences Institute, Sept 2019

#### **TEACHING**

## University of Edinburgh, Informatics:

### Tutor:

- NLU+ (Natural Language Understanding)MLPR (Machine Learning Practical)

Develop Coursework (assignments, labs) for ANLP (Accelerated NLP)

Primary supervisor for Informatics MSc Student dissertations

Tutor (2008-2010):

- C++, Astronomy, Earth & Space Sciences, ESL Composition, Ancient Greek