ROYI RASSIN

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First year PhD at BIU NLP lab, supervised by Prof. Yoav Goldberg. I'm broadly interested in under-specified language, interpretability of neural models, and more recently, fundamental research in language modeling.

EDUCATION

Ph.D in Natural Language Processing and Machine Learning   2022 – Present
Bar-Ilan University
Advisor: Prof. Yoav Goldberg
Research Topics: Underspecified Language; Abstractive Abilities of Learning Models; Interpretability; Representational Learning

M.Sc in Natural Language Processing and Machine Learning   2020 – 2022
Bar-Ilan University
Graduated with a final grade of 94 (Dean's List).
Advisor: Prof. Yoav Goldberg and Prof. Reut Tsarfaty
Research Topics: Modeling Implicit Language; Information Extraction; Interpretability; Language Understanding in Diffusion Models

B.Sc in Computer Science   2016 – 2019
College of Management
Graduated with a final grade of 94 (Dean's List).
Final Project: Machine Learning for Anomaly Detection in an imbalanced setting.

EXPERIENCE

Applied Science Internship, Amazon   June 2023 - Nov

I'll be working with a supervisor in Amazon to ultimately publish a paper in a top NLP conference.

NLP Research & Development, Tymely   March 2023 - June 2023

- Developed and implemented an intent classification model for a large label space, improving accuracy by an order of magnitude compared to the existing model.

- Ensured the model's efficiency in terms of time and cost, while maintaining high performance across various organizations with unique and shared intents.

- Optimized model performance to meet real-time processing requirements, contributing to enhanced productivity and user experience.

- Collaborated with cross-functional teams to integrate the new model into production, successfully enhancing the company's product offerings.

Machine Learning Teaching Assistant   Oct 2019 - Present

TA in multiple graduate-level machine learning courses for computer science students.

Research Engineer, Geva's Neuropsychology Lab   2019 - 2020

Tested neuroscientists' hypotheses on a research project which focuses on predicting infants' likelihood of developing social impairments through eye-movement

Research Intern, Basis Technology   Jul - Oct 2019

Developed an internal research framework; optimized performance of neural models for a Chinese Word Segmentation task; Researched the feasibility of learning instant-messages behavior from an email dataset.

PUBLICATIONS

- **Royi Rassin**, Eran Hirsch, Daniel Glickman, Shauli Ravfogel, Yoav Goldberg, Gal Chechik. **Syntactic Binding in Diffusion Models: Enhancing Attribute Correspondence through Attention Map Alignment**. Submitted to NEURIPS 2023.

- **Royi Rassin**, Yoav Goldberg, Reut Tsarfaty. **Conjunct Resolution in the Face of Verbal Omissions.** ACL 2023.

- **Royi Rassin***, Shauli Ravfogel*, Yoav Goldberg. **DALLE-2 is Seeing Double: Flaws in Word-to-Concept Mapping in Text2Image Models.** BlackBoxNLP@EMNLP 2022.

ACADEMIC SERVICE

Reviewer: EMNLP 2022

AWARDS

- 2022-2026: The Presidential Scholarship for Outstanding PhD Students

- 2020-2022: The Departmental Scholarship for Outstanding MSc Students

- 2019: Dean's List (BSc Computer Science)

- 2018: Perach Distinguished Mentor in CS

TECHNICAL STRENGTHS

NLP	HuggingFace, Transformers, MTurk, Rule-based NLP, spaCy, Dependency Graphs
ML Tools	PyTorch, Tensorflow, Scikit, Pandas, NumPy, Python
Languages	Python, Javascript and React

MISCELLANEOUS

- 2022: attended LxMLS, a selective Machine Learning for NLP summer school

- 2019: Visiting student at Xihua University - took part in a student delegation in order to strengthen the relations between Computer Science students in China and Israel

- 2018: Perach - mentored fellow CS students with learning difficulties