# ROYI RASSIN

(+972) 524881555 ⋄ rassinroyi@gmail.com

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. **Linguistic Binding in Diffusion Models: Enhancing Attribute Correspondence through Attention Map Alignment**. Under review.

- **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