

ROYI RASSIN

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Second year PhD at BIU NLP lab, supervised by Prof. Yoav Goldberg. I'm broadly interested in pushing the limitations of generative multi-modal models and improving the alignment between modalities.

EDUCATION

Ph.D in Natural Language Processing and Machine Learning Bar-Ilan University Advisor: Prof. Yoav Goldberg Research Topics: Image-text alignment and controlled generation.	2022 – Present
M.Sc in Natural Language Processing and Machine Learning 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.	2020 – 2022
B.Sc in Computer Science College of Management Graduated with a final grade of 94 (Dean's List). Final Project: Machine Learning for anomaly detection in an imbalanced setting.	2016 – 2019

EXPERIENCE

AI Research Intern, Google Researching consistency in multimodality.	June 2024 - Present
AI Research Intern, BRIA AI Researching editing and robustness in text-to-image diffusion models.	Jan 2024 - April 2024
Applied Science Internship, Amazon Researched improved evaluation methodologies for text retrieval models, the work will be submitted to a top NLP venue.	June 2023 - Dec 2023
NLP Research & Development, Tymely I trained, evaluated, and helped integrate the first deep learning model to production.	March 2023 - June 2023
Machine Learning Teaching Assistant TA in multiple graduate-level machine learning courses for computer science students.	Oct 2019 - Oct 2023
Research Engineer, Geva's Neuropsychology Lab Tested neuroscientists' hypotheses on a research project which focuses on predicting infants' likelihood of developing social impairments through eye-movement	2019 - 2020
Research Intern, Basis Technology 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.	Jul - Oct 2019

PUBLICATIONS

Royi Rassin, Yaron Fairstein, Oren Kalinsky, Guy Kushilevitz, Nachshon Cohen, Alexander Libov, Yoav Goldberg **Evaluating D-MERIT of Partial-annotation on Information Retrieval**. Under review.

Lital Binyamin, Yoad Tewel, Hilit Segev, Eran Hirsch, **Royi Rassin**, Gal Chechik **Make It Count: Text-to-Image Generation with an Accurate Number of Objects**. Under review.

Jiao Sun*, Deqing Fu*, Yushi Hu*, Su Wang, **Royi Rassin**, Da-Cheng Juan, Dana Alon, Charles Herrmann, Sjoerd van Steenkiste, Ranjay Krishna, Cyrus Rashtchian **DreamSync: Aligning Text-to-Image Generation with Image Understanding Feedback**. Under review.

Royi Rassin, Eran Hirsch, Daniel Glickman, Shauli Ravfogel, Yoav Goldberg, Gal Chechik. **Linguistic Binding in Diffusion Models: Enhancing Attribute Correspondence through Attention Map Alignment**. NeurIPS 2023 (oral 0.5% of papers).

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

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

ACADEMIC SERVICE

Reviewer: Regularly reviewing NeurIPS, ICML, *ACL

AWARDS

- 2023 - 2026: Israeli Council for Higher Education (Vatat) Fellowship for Outstanding PhD Students in Data Science
- 2022-2026: The Presidential Scholarship for Outstanding PhD Students
- 2020-2022: The Departmental Scholarship for Outstanding MSc Students
- 2022: Dean's List (MSc Computer Science)
- 2019: Dean's List (BSc Computer Science)
- 2018: Perach Distinguished Mentor in CS

ACCEPTED TALKS

NeurIPS, Dec 2023: Linguistic Binding in Diffusion Models: Enhancing Attribute Correspondence through Attention Map Alignment

INVITED TALKS

- Visual Computing seminar, Tel Aviv University (Jan, 2024)
- Prof. Yonatan Belinkov's NLP group, Technion (Jan, 2024)
- BRIA AI (Jan, 2024)

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