

MICHAEL TOKER

PhD student, Yonatan Belinkov's NLP Lab

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Israel, Petah-Tikva

mnlp

tokeron

EDUCATION

Direct to PhD in Computer Science, GPA - 90

Technion - Israel Institute of Technology

Oct 2022 (expected graduation: 2027)

- Thesis Advisor: Yonatan Belinkov,
- Thesis Topic: Explainability in LMs.
- Teaching: Introduction to computer science in Python

B.Sc. in Computer Science, GPA - 85

Technion - Israel Institute of Technology

Oct 2017 - March 2022

- Notable courses: Natural Language Processing, Machine Learning, Seminar in Computer Vision, Seminar in Natural Language Processing, Advanced topics in Deep Learning.

PUBLICATIONS

Diffusion Lens

ACL 2024 (Main Conference))

Text-to-image diffusion models (T2I) use a latent representation of a text prompt to guide the image generation process. In this work I propose a method for analyzing the text encoder of T2I models by generating images from its intermediate representations. Using Diffusion Lens, I perform an extensive analysis of two recent T2I models and find that the text encoder gradually builds prompt representations across multiple scenarios.

Metaphor Detection

EACL 2024 (Main Conference)

The objective of this research is to develop a model for detecting metaphors in Hebrew. In order to solve the problem, I use transformer-based pre-trained models such as mT5 and alephBERT (a Hebrew version of BERT). During the research, I develop and test novel approaches for detecting metaphors and training for low-resource language tasks.

PERSONAL PROJECTS

Telegram Bot (around 2,500 users)

- Managing a team of six developer students.
- Developing features from idea to deployment, from design to coding.
- Educating oneself and other members of the team.

EXPERIENCE

Computer Vision Algorithm Developer

RAFAEL

Oct 2021 - Oct 2022

Leshem

- Development of deep learning algorithms using PyTorch.
- Research team member.
- Improvements to the tracking algorithm.

Computer Vision Student

RAFAEL

Feb 2021 - Oct 2021

Leshem

- Experience with computer vision libraries.

Combat Medic

Israel Defense Forces

Nov 2013 - Nov 2016

Home Front Command

- First-aid instructor

INTERESTS

AI

NLP

Entrepreneurship

Running

Chess

EXTRACURRICULAR

Organizing the CS Hackathon

cs4people 2022-2024

For the past three years, I have organized the Computer Science hackathon to develop community-benefiting technologies.

Google Developer Student Club Lead

Technion

Club establishment, industry collaboration, managing a team of twelve students, organizing developer events

Technion BizTech 2023 - entrepreneur program

Our project aims to improve the way children learn through the use of text to image models and large language models.