

# Morris Alper, M.Sc.

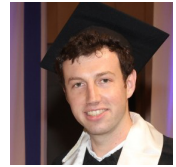
✉ morrisalper@mail.tau.ac.il

📄 Google Scholar

🐙 GitHub

🌐 morrisalp.github.io

🌐 LinkedIn



I am interested in multimodal learning, particularly using linguistic knowledge combined with vision and other structured modalities for complex tasks that require high-level semantic understanding.

## Education

2023 – ongoing	<b>Ph.D., Tel Aviv University</b> Electrical Engineering (Machine Learning) Advisor: <i>Dr. Hadar Averbuch-Elor</i>
2019 – 2023	<b>M.Sc. (cum laude), Tel Aviv University</b> Computer Science Advisor: <i>Dr. Hadar Averbuch-Elor</i> Thesis: <i>Learning Human-Human Interactions in Images with Weak Textual Supervision</i> GPA: 98 / 100
2012 – 2016	<b>B.Sc., Massachusetts Institute of Technology (MIT)</b> Linguistics and Mathematics (dual major). GPA: 4.9 / 5

## Employment History

2024	<b>Research Scientist Intern, Meta.</b> Developing 3D generative models.
2019 – 2023	<b>Data Science Lead and Lecturer, Israel Tech Challenge.</b> Designed syllabus, wrote, and delivered lectures on data science to industry professionals.
2019 – 2021	<b>NLP Data Scientist, Pipl, Inc.</b> Designed information extraction algorithms for unstructured textual web data.
2018 – 2019	<b>NLP Data Scientist, Reverso-Softissimo.</b> Designed NLP algorithms to automatically correct and enrich linguistic data.
2017 – 2018	<b>Software Developer, K Dictionaries.</b> Managed API for lexicographic data, and developed algorithms for data enrichment
2015 – 2016	<b>Software and Algorithm Developer, Voiceitt.</b> Prototyped speech recognition algorithms and integrated them into the company's API.
2016	<b>Algorithm Development Intern, SECOM.</b> Developed algorithms for improved facial recognition.
2012-2015	<b>Undergraduate Research in Cognitive Linguistics, TedLab, MIT.</b> Analyzed psycholinguistic survey data to study cognition and language.

## Research Publications

\* indicates equal contribution.

### Peer-Reviewed Conference Papers



1. Assaf Ben-Kish, Moran Yanuka, **Morris Alper**, Raja Giryes. Hadar Averbuch-Elor. Mitigating Open-Vocabulary Caption Hallucinations. *EMNLP*, 2024.
2. **Morris Alper** and Hadar Averbuch-Elor. Emergent Visual-Semantic Hierarchies in Image-Text Representations. *Proceedings of the European Conference on Computer Vision (ECCV)*, 2024. (Oral)
3. Moran Yanuka, **Morris Alper**, Hadar Averbuch-Elor, Raja Giryes. ICC : Quantifying Image Caption Concreteness for Multimodal Dataset Curation. *ACL (Findings)*, 2024.

4. Chen Dudai\*, **Morris Alper**\*, Hana Bezalel, Rana Hanocka, Itai Lang, and Hadar Averbuch-Elor. HaLo-NeRF: Learning Geometry-Guided Semantics for Exploring Unconstrained Photo Collections. *Proceedings of the Eurographics Conference (EG)*, 2024.
5. **Morris Alper** and Hadar Averbuch-Elor. Kiki or Bouba? Sound Symbolism in Vision-and-Language Models. *Advances in Neural Information Processing Systems (NeurIPS)*, 2023. (Spotlight)
6. **Morris Alper** and Hadar Averbuch-Elor. Learning Human-Human Interactions in Images from Weak Textual Supervision. *Proceedings of the IEEE/CVF International Conference on Computer Vision (ICCV)*, 2023.
7. **Morris Alper**\*, Michael Fiman\*, and Hadar Averbuch-Elor. Is BERT Blind? Exploring the Effect of Vision-and-Language Pretraining on Visual Language Understanding. *Proceedings of the IEEE/CVF Conference on Computer Vision and Pattern Recognition (CVPR)*, 2023.

## Miscellaneous Experience

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### Presentations and Interviews

- 2024      IMVC 2024 presentation on “Kiki or Bouba?” NeurIPS 2023 paper
-  Radio interview for Kan Tarbut program on VLM sound symbolism research (46:30-60:00, Hebrew language)

### Awards and Achievements

- 2011     **International Linguistics Olympiad**, first place internationally (both individual and team rounds), best solution (problem 2), Zhurinsky Memorial Prize.
- 2009     **International Linguistics Olympiad**, honorable mention (individual round), first place in team round.
- 2008     **International Linguistics Olympiad**, tied for 6th place individual round (silver medal).

### Academic Teaching Experience

Fall 2023     **Digital Signal Processing**, teaching assistant, Tel Aviv University.

### Peer Review Service

- 2024     COLM, NeurIPS, ACML

## Languages

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**English** (native), **Hebrew** (professional), **French** (intermediate)

## References

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Available upon request