Morris Alper, M.Sc.

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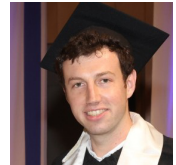
I am interested in multimodal learning, particularly using linguistic knowledge combined with vision and other structured modalities for complex tasks that require high-level semantic understanding.

Education

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

Employment History

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

Research Publications

* indicates equal contribution.

Peer-Reviewed Conference Papers

1. Moran Yanuka, **Morris Alper**, Hadar Averbuch-Elor, Raja Giryes. ICC : Quantifying Image Caption Concreteness for Multimodal Dataset Curation. *ACL (Findings)*, 2024.

2. 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.

3. **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 paper)*

4. **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.

5. **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

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.

Languages

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

References

Available upon request