Samuel Joseph Amouyal

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Computer Science PhD candidate (3^{nrd} year) at Tel-Aviv University co-advised by Prof. Jonathan Berant and Prof. Aya Meltzer-Asscher. My main area of research is Natural Language Processing. I am interested in comparing humans and Large Language Models (LLMs), specifically their error patterns to try to learn information on one of them using the other.

Education PhD Candidate in Computer Science, Tel-Aviv University 2022 - Now NLP research focused on verifying the error patterns of LLMs on specific linguistic structures and their similarity to humans. My work on using LLMs instead of humans as part of the pretesting process has been accepted in Findings of EACL 2024 [2]. My second PhD paper comparing humans and LLM comprehension of garden-path sentences [1] got accepted as a talk at ISCOP 2025 and is under review for ACL 2025 Additional research projects include: building a benchmark to test economic rationality (accepted as poster ICML [3]), building a benchmark for web-agent (accepted as a talk at EMNLP [4] MSc in Computer Science, Tel-Aviv University 2020 - 2022 My thesis work, advised by Prof. Jonathan Berant, focused on generating questions with many answers (at least 5), presented at an EMNLP workshop [6]. Final grade: 95/100, Thesis grade: 97/100 Adi Lautman Interdisciplinary Program for Outstanding Students, Tel-Aviv University 2018 - 2022 The program allows taking as many courses as desired, leading directly to an MS.c without a bachelor. Took many courses in Psychology, Neuro Science, Biology, Philosophy and others... **Experience** NLP Research Lead, BlingIO 2023 - Now NLP Research lead at BlingIO, a pre-seed startup developing a generative AI agent

- that replaces human QA engineers.
- Responsible for leading the company's NLP research for all the different tasks (training the agent, prompt engineering, algorithms for pre and post-processing ...)

Teaching assistant, Computational models, TAU

2022 - Now

Teach tutorials to classes of 50-60 students

Research Scientist, Mobileve

2022 - 2023

- Research scientist in the GT2D R&D team. Leading research on two main project: allowing multi-modal models to reason over images and model selection using
- Built the deep learning training library currently used by the GT team (200 people).

Algorithm Engineer, Mobileye

 Part of a team (GT2D) responsible for creating algorithms (models + post-processing) to extract ground truth used by whole Mobileye from 2D images.

Awards and Honors

- TAD grant recipient
- Adi Lautman's Excellence scholarship recipient

Conferences and Poster Presentations

- Presented my MSc thesis work [6] as a virtual poster at Generation, Evaluation & Metrics Workshop@EMNLP, 2023
- Presented the first work of my PhD [2] as a poster at Finding of EACL (March 2024).
- The second work of my PhD [3] accepted as a poster at ICML 2024.
- Third work of my PhD [4] accepted as a talk at EMNLP 2024.

Publications

Conference Papers

- [1] When the LM misunderstood the human chuckled: Analyzing garden path effects in humans and language models. **Samuel Joseph Amouyal**, Aya Meltzer-Asscher, Jonathan Berant. (Accepter as a talk at ISCOP 2025, Under review ACL 2025) [paper]
- [2] Large Language Models for Psycholinguistic Plausibility Pretesting. **Samuel Joseph Amouyal**, Aya Meltzer-Asscher, Jonathan Berant. *Findings of EACL 2024*. [paper]
- [3] Rationality Report Cards: Assessing the Economic Rationality of Large Language Models. Narun Raman, Taylor Lundy, **Samuel Joseph Amouyal**, Yoav Levine, Kevin Leyton-Brown, Moshe Tennenholtz. ICML 2024 [paper]
- [4] AssistantBench: Cam Web Agent Solve Realistic and Time Consuming Tasks? Ori Yoran, **Samuel Joseph Amouyal**, Chaitanya Malaviya, Ben Bogin, Ofir Press, Jonathan Berant. EMNLP 2024 [paper]
- [5] GLEE: A Framework and Benchmark for LLM Evaluation in Language-based Economics. Eilam Shapira, Omer Madmon, Itamar Reinman, **Samuel Joseph Amouyal**, Roi Reichart, Moshe Tennenholtz [paper]
- [6] QAMPARI: an Open-Domain Question Answering Benchmark for Questions with Many Answers from Multiple Paragraphs. **Samuel Joseph Amouyal**, Ohad Rubin, Ori Yoran, Tomer Wolfson, Jonathan Herzig, Jonathan Berant. *Generation, Evaluation & Metrics Workshop@EMNLP*, 2023 [paper] [project]