Michael Hassid

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CURRENT

Hebrew University of Jerusalem - PhD *Candidate in Computer Science (third year)*

Meta AI (FAIR) - *Research Assistant*

EDUCATION

2022 - Present: Hebrew University of Jerusalem - *PhD in CS*

- Research Advisors: Prof. **Roy Schwartz** and Dr. **Yossi Adi**
- Main research topics:
    - LLM reasoning and planning for math and code generation
    - Efficient mechanisms for LLMs
    - Speech language models (SpeechLMs)
- **Publication presented in the second page**

2020 - 2022: Hebrew University of Jerusalem - *MSc. in CS (**excellence program**)*

- Final GPA: **98.19**
- Honors: **cum laude**
- Research Advisor: Prof. **Roy Schwartz**
- Main research topic: Attention Mechanisms for NLP

2016 - 2019: Hebrew University of Jerusalem - *BSc. in CS (**excellence program**)*

- Honors: **summa cum laude**
- Final GPA: **97.22**

EXPERIENCE

2022 - Present: Meta AI, FAIR - *Research Assistent (PhD program)*

- Research topics:
    - LLM Reasoning in semantic space
    - Code generation with LLMs
    - Speech language models (SpeechLMs)

2023 - 2024: Hebrew University of Jerusalem - *Lecturer*

- Lecturer of the "Advanced Natural Language Processing (ANLP)" course

2020 - 2022: Google, Cerebra - *Research Intern (Full & Part time internship)*

- ML driven solutions for real life tasks (mainly research, some production work):
    - Main research: NLP, TTS
    - Research publication and approved patent

2019 - 2020: Google, Search Console - *Software Engineer (Part time internship)*

- SAN Insights Provider: Generating insights for Search Console users
    - Project is deployed in Search Console

2017 - 2019: Hebrew University of Jerusalem - *Teacher Assistant*

- Teacher Assistant; "Introduction To Computer Science" course

AWARDS

Meta AI- PhD excellence program (**PhD**)
Graduated **cum laude (MSc.)**
Computer Science excellence program of HUJI (**MSc.**)

Ulman scholarship for excellence students (**MSc.**)

Graduated **summa cum laude (BSc.)**

Computer Science excellence program of HUJI (**BSc.**)

Dean's List:
2017 (**Bsc.**), **2018** (**Bsc.**), **2020** (**MSc.**)

Dean's Award:
2018 (**Bsc.**), **2020** (**Msc.**)

SKILLS

Research & Work experience with **ML** methods (specifically Deep Learning).

Deep understanding of **LLMs** (from high level to code)

Experience with Deep Learning frameworks:
PyTorch, TensorFlow and Jax.

MORE

Psychometric Grade: **726**
Matriculation Examination ("Bagrut")
GPA: **114.3**

HOBBIES

Spoken Word poet (Poetry Slam) - search on YouTube - **"מיכאל חסיד"**.

References available upon request.

PUBLICATIONS (Google Scholar)

M. Hassid, T. Remez, ..., R. Schwartz, Y. Adi
Textually Pretrained Speech Language Models
Advances in Neural Information Processing Systems 2023 **(NeurIPS 2023)**. Arxiv

M. Hassid*, T. Remez*, J. Gehring, R. Schwartz, Y. Adi
The Larger the Better? Improved LLM Code-Generation via Budget Reallocation
Conference On Langiage Models 2024 **(COLM 2024)**. Arxiv

M. Oren*, **M. Hassid***, N. Yarden, Y. Adi, R. Schwartz
Transformers are Multi-State Rnns
Empirical Methods in NLP 2024 **(EMNLP 2024)**. Arxiv

M. Hassid, G. Synnaeve, Y. Adi, R. Schwartz
Don't Overthink it. Preferring Shorter Thinking Chains for Improved LLM Reasoning
Under Review. Arxiv

M. Hassid, H. Peng, D. Rotem, J. Kasai, I. Montero, N. Smith, R. Schwartz
How Much Does Attention Actually Attend? Questioning the Importance of Attention in Pretrained Transformers
Findings of Empirical Methods in NLP 2022 **(EMNLP 2022)**. Arxiv

M. Hassid, M. Tadmor, B. Shillingford, M. Wang, Y. Jia, T. Remez.
More than Words: In-the-Wild Visually-Driven Prosody for Text-to-Speech
Conference on Computer Vision and Pattern Recognition 2022 **(CVPR 2022)**. Arxiv

D. Rotem, **M. Hassid**, J. Mamou, R. Schwartz
Finding the sweet spot: Analysis and improvement of adaptive inference in low resource settings
Association for Computational Linguistics 2023 **(ACL 2023)**. Arxiv

G. Maimon, **M. Hassid**, A. Roth, Y. Adi
Scaling analysis of interleaved speech-text language models
Under Review. Arxiv

T. Ghattas, **M. Hassid**, R. Schwartz
On Pruning State-Space LLMs
Under Review. Arxiv

S. Levy, N. Mazor, L. Shalmon, **M. Hassid**, G. Stanovsky
More Documents, Same Length: Isolating the Challenge of Multiple Documents in RAG
Under Review. Arxiv

TA. Nguyen, ..., **M. Hassid**, ..., E. Dupoux
Expresso: A benchmark and analysis of discrete expressive speech resynthesis
Interspeech 2023 **(Interspeech 2023)**. Arxiv

M. Treviso, ..., **M. Hassid**, ..., R. Schwartz
Efficient methods for natural language processing: a survey
Transactions of the Association for Computational Linguistics **(TACL)**. Arxiv

M. Hassid, S. Caduri, N. Bar, D. Cohen, B. Schlesinger, M. Tadmor
Method and system for text-to-speech synthesis of streaming text
WO Patent 2,022,093,192