

YOSSI ADI - CURRICULUM VITAE

PERSONAL INFORMATION

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RESEARCH INTERESTS

Machine learning; Audio, Speech and Language Analysis; Music.

WORK EXPERIENCE

2019-present Research Scientist, FACEBOOK AI RESEARCH, TEL AVIV LAB. I am working on machine learning and deep learning models for audio and speech processing.

2017 Research Intern, FACEBOOK AI RESEARCH, NEW YORK LAB. I was working on adversarial learning for letter based automatic speech recognition models, [\[paper\]](#).

2015-2016 Machine Learning Researcher, Machine Learning Technologies Group, IBM, HAIFA RESEARCH LABS. I was working on analysis of unsupervised sentence embeddings. [\[paper1\]](#), [\[paper2\]](#).

2013-2014 Software R&D, MEDUCE. I was developing data and process mining algorithms for patient medical records.

EDUCATION

2016-2019 Ph.D. in Computer Science, Department of Computer Science, Bar-Ilan University, Ramat-Gan, Israel.
Advisor: Dr. Joseph Keshet.
Dissertation: *On the Robustness of Deep Neural Models and Their Applications to Speech Science*.

2014-2015 M.Sc in Computer Science, Department of Computer Science, Bar-Ilan University, Ramat-Gan, Israel.
Advisor: Dr. Joseph Keshet.
Thesis topic: *Automatic Analysis of Speech and Language Data using Deep Structured Learning*.

2011-2013 B.Sc in Computer Science, Summa cum laude
School of Computer Science,
College of Management Academic Studies, Rishon-Le Zion, Israel.

AWARDS AND SCHOLARSHIPS

2020 Best Doctoral Dissertation Award - The Israeli Association for Artificial Intelligence (IAAI).

2017 Rector's Award for Excellence in Academic Studies - Bar-Ilan University.

2016 President Award for Excellence (Ph.D Students) - Bar-Ilan University.

2014 Zvulun Hammer Scholarship.

2012 President Award for Excellence - College of Management Academic Studies.

PUBLICATIONS

- 2020 Felix KREUK, Joseph KESHET, **Yossi Adi**. Self-Supervised Contrastive Learning for Unsupervised Phoneme Segmentation. *The 21st Annual Conference of the International Speech Communication Association (Interspeech)*.
- 2020 Adam POLYAK, Lior WOLF, **Yossi Adi**, Yaniv TAIGMAN. Unsupervised Cross-Domain Singing Voice Conversion. *The 21st Annual Conference of the International Speech Communication Association (Interspeech)*.
- 2020 Alexandre DÉFOSSEZ, Gabriel SYNNAEVE, **Yossi Adi**. Real Time Speech Enhancement in the Waveform Domain. *The 21st Annual Conference of the International Speech Communication Association (Interspeech)*.
- 2020 Felix KREUK, **Yossi Adi**, Lior WOLF. Hide and Speak: Towards Deep Neural Networks for Speech Steganography. *The 21st Annual Conference of the International Speech Communication Association (Interspeech)*.
- 2020 Eliya NACHMANI, **Yossi Adi**, Lior WOLF. Voice Separation with an Unknown Number of Multiple Speakers. *The 37th International Conference on Machine Learning (ICML)*.
- 2020 Felix KREUK, Yaniv SHEENA, Joseph KESHET, **Yossi Adi**. Phoneme Boundary Detection Using Learnable Segmental Features. *The 45th IEEE International Conference in Acoustic, Speech and Signal Processing (ICASSP)*.
- 2020 Ben GOLDBERGER, **Yossi Adi**, Joseph KESHET, Guy KATZ. Minimal Modifications of Deep Neural Networks using Verification. *The 23rd International Conference on Logic for Programming, Artificial Intelligence and Reasoning (LPAR)*.
- 2019 Jacob T. COHEN, Alma COHEN, Limor BENYAMINI, **Yossi Adi**, Joseph KESHET. Predicting Glottal Closure Insufficiency using Fundamental Frequency Contour Analysis, *Head & Neck, Journal of the Sciences and Specialities of the Head and Neck*.
- 2019 **Yossi Adi**, Neil ZEGHIDOUR, Ronan COLLOBERT, Nicolas USUNIER, Vitaliy LIPTCHINSKY, Gabriel SYNNAEVE. To Reverse The Gradient or Not: An Empirical Comparison of Adversarial and Multi-Task Learning in Speech Recognition, *The 44th IEEE International Conference in Acoustic, Speech and Signal Processing (ICASSP)*.
- 2018 Gabi SHALEV, **Yossi Adi** and Joseph KESHET. Out-of-Distribution Detection using Multiple Semantic Label Representations, *The 32nd Annual Conference on Neural Information Processing Systems (NeurIPS)*.
- 2018 Matthew GOLDRICK, Rhonda McCLAIN Baum, Emily CIBELLI, **Yossi Adi**, Erin GUSTAFSON, Cornelia MOERS and Joseph KESHET. The Influence of Lexical Selection Disruptions on Articulation, *Journal of Experimental Psychology: Learning, Memory, and Cognition*.
- 2018 **Yossi Adi**, Carsten BAUM, Moustapha CISSE, Benny PINKAS and Joseph KESHET. Turning Your Weakness Into a Strength: Watermarking Deep Neural Networks by Backdooring, *USENIX Security Symposium*.
- 2018 Felix KREUK, **Yossi Adi**, Moustapha CISSE, and Joseph KESHET. Fooling End-to-End Speaker Verification With Adversarial Examples, *The 43rd IEEE International Conference in Acoustic, Speech and Signal Processing (ICASSP)*.
- 2017 Moustapha CISSE, **Yossi Adi**, Natalia NEVEROVA, and Joseph KESHET. Houdini: Fooling Deep Structured Visual and Speech Recognition Models with Adversarial Examples, *The 31st Annual Conference on Neural Information Processing Systems (NeurIPS)*.
- 2017 Einat NAAMAN, **Yossi Adi**, and Joseph KESHET. Learning Similarity Function

for Pronunciation Variations, *The 18th Annual Conference of the International Speech Communication Association (Interspeech)*.

- 2017 Yaniv SHEENA, Misha HEJNA, **Yossi Adi**, and Joseph KESHET. Automatic Measurement of Pre-aspiration, *The 18th Annual Conference of the International Speech Communication Association (Interspeech)*.
- 2017 **Yossi Adi**, Einat KERMANY, Yonatan BELINKOV, Ofer LAVI and Yoav GOLDBERG. Fine-grained Analysis of Sentence Embeddings Using Auxiliary Prediction Tasks, *International Conference on Learning Representations (ICLR)*.
- 2017 **Yossi Adi**, Joseph KESHET, Emily CIBELLI, and Matt GOLDRICK. Sequence Segmentation Using Joint RNN and Structured Prediction Models, *The 42st IEEE International Conference in Acoustic, Speech and Signal Processing (ICASSP)*.
- 2017 **Yossi Adi**, Einat KERMANY, Yonatan BELINKOV, Ofer LAVI and Yoav GOLDBERG. Analysis of sentence embedding models using prediction tasks in natural language processing, *IBM Journal of Research and Development*.
- 2016 **Yossi Adi**, Joseph KESHET, Emily CIBELLI, Erin GUSTAFSON, Cynthia CLOPPER and Matt GOLDRICK. Automatic Measurement of Vowel Duration via Structured Prediction, *Journal of the Acoustical Society of America*.
- 2016 **Yossi Adi**, Joseph KESHET, Olga DMITRIEVA and Matt GOLDRICK. Automatic Measurement of Voice Onset Time and Prevoicing using Recurrent Neural Networks, *The 17th Annual Conference of the International Speech Communication Association (Interspeech)*.
- 2016 **Yossi Adi** and Joseph KESHET. StructED: Risk Minimization in Structured Prediction, *Journal of Machine Learning Research (JMLR)*.
- 2015 **Yossi Adi**, Joseph KESHET and Matt GOLDRICK. Vowel Duration Measurement Using Deep Neural Networks, *The 25th IEEE International Workshop on Machine Learning for Signal Processing (MLSP)*.

TEACHING

- 2018-2019 Lecturer, RIMON SCHOOL OF JAZZ AND CONTEMPORARY MUSIC. Drums and Technology.
- 2017-2019 Teaching Assistant, BAR-ILAN UNIVERSITY. Introduction to Machine Learning, Automatic Speech Recognition.
- 2015-2017 Teaching Assistant, COLLEGE OF MANAGEMENT ACADEMIC STUDIES. Introduction to Computer Science, Data Structures, Algorithms II and OOP.

SERVICE

- 2020 Reviewer for: NeurIPS, ICML, UAI, ICLR, ICASSP, InterSpeech, MLSP.
Senior Program Committee for: IJCAI.
- 2019 Reviewer for: NeurIPS, ICML, ICASSP, ICLR, UAI, IJCAI, MLSP.
- 2018 Reviewer for: NeurIPS, ICML, ICASSP, MLSP, MLSLP.

OTHER INFORMATION

- Music* I'm a professional drummer and very passionate about rhythm, drums and groove. Drumming has always been my passion and very big part of my life. Here are few links to my music: [YouTube](#), [iTunes](#), [WebSite](#).
- Interests* Drums · Music · Sound · Audio