URI SHAHAM

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Academic Education

[2012-2017]   Yale University, CT:
- Ph.D Statistics. Dissertation topic: "Algorithms, Applications and Theoretical Properties of Deep Neural Networks".
- Advisors: Prof. Ronald Coifman (Applied Math), Prof. Sahand Negahban (Statistics), Prof. Yuval Kluger (Computational Biology).

[2006-2008]   Ben-Gurion University of the Negev, Israel:
- M.Sc. Industrial Engineering. Program: Intelligent systems. Thesis topic: Classification using normalized compression distance. Thesis grade: 96/100. Overall M.Sc. grade: 89.9/100.

[2003-2007]   Ben-Gurion University of the Negev, Israel:
- B.Sc. Mathematics. Graduation summa cum laude. Grade: 93.8/100
- B.Sc. Industrial Engineering and Management. Graduation cum laude. Grade: 92.8/100.

Publications & Conferences
Accepted Publications:

- Shaham, Uri, Cloninger Alexander, and Coifman Ronald R. "Provable Approximation Properties for Deep Neural Networks". Applied and Computational Harmonic Analysis 2016.
- Shaham, Uri, Cheng, Xiuyuan, Dror, Omer, Jaffe, Ariel, Nadler, Boaz, Chang, Joseph and Kluger, Yuval. "A Deep Learning Approach to Unsupervised Ensemble Learning". ICML 2016.
- Shaham, Uri, Stanton, Kelly P., Zhao, Jun, Li, Huamin, Raddassi, Khadir, Montgomery, Ruth, and Kluger, Yuval. "Removal of Batch Effects using Distribution-Matching Residual Networks". Bioinformatics 2017.
- Li, Huamin, Shaham, Uri, Yao, Yi, Montgomery, Ruth and Kluger, Yuval. "Gating Mass Cytometry Data by Deep Learning". Bioinformatics 2017.
- Mishne, Gal, Shaham, Uri, Cloninger, Alexander, and Cohen, Israel. "Diffusion Nets". Applied and Computational Harmonic Analysis 2017.
- Shaham, Uri, and Lederman, Roy. " Learning by Coincidence: Siamese Networks and Common Variable Learning". Pattern Recognition 2018.
- Shaham, Uri, Stanton, Kelly, Li, Henry, Basri, Ronen, Nadler, Boaz, and Kluger, Yuval. "SpectralNet: Spectral Clustering using Deep Neural Networks". ICLR 2018.

- Shaham, Uri, Yamada, Yutaro, and Negahban, Sahand. "[Understanding Adversarial Training: Increasing Local Stability of Neural Nets through Robust Optimization](#)". Neurocomputing 2018.
- Katzman, Jared, Shaham, Uri, Cloninger, Alexander, Bates, Jonathan, Jiang, Tingting, and Kluger, Yuval. "[DeepSurv: personalized treatment recommender system using a Cox proportional hazards deep neural network](#)". BMC Medical Research Methodology 2018.
- Shaham Uri, Zahavy Tom, Caraballo Cesar, Mahajan Shiwani, Massey Daisy, and Krumholz Harlan. "[Learning to Ask Medical Questions using Reinforcement Learning](#)". Machine Learning in Healthcare 2020.
- Lindenbaum, Ofir, Shaham,Uri, Svirski, Jonathan, Peterfreund, Erez, and Kluger, Yuval. "[Differentiable Unsupervised Feature Selection based on a Gated Laplacian](#)". Neurips 2021.
- Shaham, Uri, Lindenbaum, Ofir, Svirsky, Jonathan and Kluger, Yuval. "Deep Unsupervised Feature Selection by Discarding Nuisance and Correlated Features". Neural Networks 2022.
- Shaham, Uri, Svirsky, Jonathan, Katz, Ori and Talmon, Ronen. "[Discovery of single independent variable](#)" Neurips 2022.

Pre-prints:

- Shaham, Uri, and Steinberger Stefan. "[Stochastic Neighbor Embedding Separates Well-Separated Clusters](#)".
- Jiang, Tingting, Shaham, Uri, Parisi, Fabio, Halaban, Ruth, Safonov, Anton, Kluger, Harriett, Weissman, Weismann, Chang, Joseph and Kluger. Yuval. "[Methods for detecting co-mutated pathways in cancer samples to inform treatment selection](#)".
- Aneja, Sanjay, Shaham, and Krumholz, Harlan. "[Deep Neural Network to Predict Local Failure Following Stereotactic Body Radiation Therapy: Integrating Imaging and Clinical Data to Predict Outcomes](#)".
- Shaham, Uri, Garritano, Jim, Yamada, Yutaro, Weinberger, Ethan, Cloninger, Alex, Cheng, Xiuyuan, Stanton, Kelly and Kluger, Yuval. "[Defending against Adversarial Attacks using Basis Functions Transformations](#)".
- Shaham, Uri. "[Batch Effect Removal via Batch Free Encoding](#)".
- Au, Benjamin, Shaham, Uri, Dhruva, Sanket, Bouras, Georgios, Cristea, Ecaterina, Coppi, Andreas, Warner, Fred, Li, Shu-Xia, and Krumholz, Harlan." [Automated Characterization of Stenosis in Invasive Coronary Angiography Images with Convolutional Neural Networks](#)".
- Shaham, Uri and Svirsky, Jonathan. "[Deep Ordinal Regression using Optimal Transport Loss and Unimodal Output Probabilities](#)".

Academic Experience
- **[2022-Present]**   Assistant Professor, Department of Computer Science, Bar Ilan University.
- **[2017-Present]**   Assistant Professor Adjunct, Center for Outcome Research and Evaluation, Yale University.

Work Experience

- **[2021-2023]**   AI mentor at Israel's prime minister's office
- **[2017-2021]**   Researcher at Final. Developing algorithms for high frequency trading.
- **[2010-2012]**   Senior Machine Learning researcher at PayPal.
- **[2009-2010]**   Algorithm developer at Retalix.
- **[2008-2009]**   Algorithms developer at startup company "Zikit Artificial Intelligence".

Areas of Professional Interest

- Machine learning, Deep Learning, Statistics, Applied Mathematics, Design of algorithms, Information theory, Evolutionary algorithms.

Technical Knowledge & Software

- Python, PyTorch, Matlab, R.

Languages:

- Hebrew - mother tongue
- English - excellent mastery

Skills and Other Information:

- High motivation, professional curiosity and high learning ability.
- Good inter-personal communication skills, team player.
- Independent.
- Psychometric grade: 768\800.
- Play and perform jazz on piano, studied 4 years at Rimon School of jazz and contemporary music.

Links:

- Google Scholar
- LinkedIn
- GitHub