

Ohad Felsenstein

Data Scientist

Work History

2020-10 -
2021-03

Lead Data Scientist

TimeStamp, Tel Aviv

- In charge on the full pipeline of data as a single employee in fields of software and data processing. From designing and collection of data, through signal processing and features engineering, to inference algorithm and implementation.
- The developed model achieved over 97% accuracy in a task of inferring patients' actions from raw accelerometers data.

2015-06 -
2018-10

Visiting Researcher

Massachusetts General Hospital , Boston, MA

During summer in four consecutive years between 2015 to 2018

- Provided scientific and technical expertise to co-create and develop a novel multi-modal visualization tool as part of a DARPA challenge.
- The group included one other developer and was part of the Harvard university, Mass General Hospital and Draper labs team..

2014-05 -
2016-02

Data Scientist

Elbit Systems Ltd, Haifa

- As single data scientist in team, position included establishing analysis methods and machine learning approaches for researching sensors systems and geo-data.

2008-03 -
2010-10

Entrepreneur, Founder and Manager, Staff Manager

Remembag, Tel Aviv

- Managed two software engineers.
- Project reached stage of proof of concept and meetings with venture capital funds.

Contact

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Skills

Creative thinking



Critical thinking



Problem solving



Analytical skills



Self-learner



Scientific writing



Education

2015-10 -
2020-10

Ph.D.: Computational Neuroscience

Bar-Ilan University - Ramat Gan, Israel

- Dissertation: "Decoding higher brain functions using spatio-temporal patterns".
- Graduated with 91.8/100 GPA.
- Awarded Bar-Ilan Presidential scholarship for distinguished Ph.D. students, Bar-Ilan University, Israel.
- Awarded best video award in Ein-Gedi conference, Gonda multidisciplinary brain research center, Bar-Ilan University, Israel.

2013-10 -
2015-10

Master of Science: Computational Neuroscience

Bar-Ilan University - Ramat Gan, Israel

2010-10 -
2013-10

Bachelor of Science: Double Major in Neuroscience And Computer Science

Bar-Ilan University - Ramat Gan, Israel

Research Activity

- 2019-2020 **Characterizing the temporal and spatial properties of spatio-temporal patterns.** Developing a machine-learning pipeline for investigating the temporal and spatial aspects of spatio-temporal patterns by using a decoding approach for inferring behavior. The data was collected in a sensory-motor study conducted in MEG. Under the supervision of prof. M. Abeles (BIU & HUJI)
- 2015-present **Developing software for visualizing and exploring multi-modal brain activity.** Creating software to explore and visualize data as measured by MEG, fMRI and Depth electrodes through space and time. The software enables the presentation of data over the cortical and subcortical structures of the individual human subjects. Research project as a visiting Ph.D. student in Massachusetts general hospital, United States. Under the supervision of Prof. S. Stufflebeam) and Prof. M. Hamalainen (Harvard).

Team player


Very Good

Statistical analysis


Excellent

Matlab


Excellent

Python


Very Good

- 2014-2019 **Distinguishing between different synchronous states using pairwise spatio-temporal patterns.** Creating a probabilistic model and classification framework, to differentiate between two cognitive states. Feasibility study for investigating using precise spatio-temporal patterns for decoding. The data was collected in a sensory-motor study conducted in MEG. Under the supervision of prof. M. Abeles (BIU & HUJI) and Prof. G. Chechik (BIU)

Publications

Papers

- **O. Felsenstein*** , N. Peled*, E. Hahn, A. P. Rockhill, L. Folsom, T. Gholipour, K. Macadams, N. Rozengard, A. C. Paulk, D. Dougherty, S. S. Cash, A. S. Widge, M. Hämäläinen, S. Stufflebeam (2019). Multi-Modal Neuroimaging Analysis and Visualization Tool (MMVT). preprint arXiv:1912.10079
- **O. Felsenstein** , I. Tal, M. Ben-Shachar, M. Abeles, G. Chechik (2018). Time differences of magnetoencephalogram events for decoding multimodal behavior. preprint arXiv:1901.08093.

Conference Presentations

- N. Peled, **O. Felsenstein** , E. Hahn, A. Rockhill, L. Folsom, T. Gholipour, N. Rozengard, A. C. Paulk, A. S. Widge, D. Dougherty, S. S. Cash, M. Hamalainen, S. Stufflebeam. Multi modal neuroimaging visualization and analysis tool Society for Neuroscience meeting (2019) in Chicago, IL (Poster)
- N. Peled, **O. Felsenstein** , R. Laplante, T. Sitnikova, S. Zorowitz, A. Afzal, A. Gilmour, K. K. Ellard, A. C. Paulk, K. Farnes, T. Deckersbach, A. S. Widge, S. S. Cash, D. D. Dougherty, E. N. Eskandar, M. Hamalainen, S. Stufflebeam. A 3D visualization tool for invasive electrodes spatial-temporal localization using fMRI, EEG and MEG Society for Neuroscience meeting (2017) in Washington, DC (Dynamic poster).

- **O. Felsenstein** , M. Abeles, G. Chechik (2016). Sparse probabilistic approach to decode sensori-motor activity from precise MEG time delays. Representation Learning in Artificial and Biological Neural Networks Workshop (poster), NIPS 2016
- **O. Felsenstein** , G. Chechik, M. Abeles (2016). Precise time delays in human cortico-cortical events allow to accurately decode sensori-motor activity. The 25th ISFN Annual Meeting(posters).
- N. Peled, **O. Felsenstein** , R. Laplante, T. Sitnikova, S. Zorowitz, A. Afzal, A. Gilmour, K. K. Ellard, D. L. Vallejo, A. C. Paulk, K. Farnes, T. Deckersbach, S. Stuffelbeam, M. Hamalainen, A. S. Widge, S. S. Cash, D. D. Dougherty, E. N. Eskandar(2016). A multi-modality visualization tool. Society for Neuroscience meeting (2016) in San Diego, CA(Dynamic poster).
- **O. Felsenstein** , N. Peled, S. Stuffelbeam, M. Hamalainen (2016) Multi-Modality Visualization Tool. Biomag 2016(posters).