

Matar Haller

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Experience

AI Research Engineer, SparkBeyond, Netanya, Israel 2018-present

- Develop and implement machine learning algorithms to power an automated research engine that generates novel insights across a range of domains.

Senior Data Scientist, SparkBeyond, Netanya, Israel 2017-2018

- Lead proof of concepts for client engagements, provided technical training and mentorship, and improved product usability.
- Built relationships with business owners to plan and execute data science partnerships that generated measurable impact.

Data Scientist, Winton Capital, San Francisco, CA 2016-2017

- Collaborated to engineer infrastructure to read and parse streams of data from Apache Kafka into Kudu using Spark.
- Integrated Jupyter notebooks with Apache Impala to provide simple access to rapidly changing distributed data to researchers in Zurich, London, and Oxford.

Data Science Fellow, Insight Data Science, Palo Alto, CA 2016

- Consulted for startup DeepGram to automatically segment unidentified speakers in recorded audio files.
- Engineered unsupervised algorithm combining spectral decomposition, PCA, and hierarchical clustering.
- Delivered code for use in existing predictive models and company proof of concept pitches.
- Presented as talk at Strata-Hadoop 2017 in San Jose, CA.

Graduate Student Researcher, Helen Wills Neuroscience Institute, UC Berkeley 2010 – 2016

- Recorded activity from surgically implanted electrodes on human brains. Implemented time series analyses, PCA, clustering, ridge regression and permutation tests to link neuronal activity with behavior. Published in *Nature Human Behavior*.
- Developed method for extracting oscillatory components from power spectra using linear regression, k-means clustering, curve fitting and cross validation. Precision and recall match human performance.
- Supervised and mentored research assistants and graduate students. Taught experimental design, electrophysiology recording, and analysis pipeline using Python and MATLAB.

Graduate Student Instructor, UC Berkeley 2005 – 2013

- Collaborated with graduate students and professors to construct lesson plans for Neuropsychology, Drugs & the Brain, and Cognitive Science courses, each with 100-600 students each.
- Awarded Outstanding Graduate Student Instructor. Average evaluation: 6.7/7

Projects

OkNLP 2016

- Combined NLP (tf-idf, tokenization) with machine learning (non-negative matrix factorization, grid search, cross validation) to analyze free text and demographic information from online dating profiles.
- Identified unintentional signals of drug usage status in free text self-descriptions across 60k user profiles.
- Presented as talk at SciPy 2016 in Austin, Texas and published in conference proceedings.

Military

Tank Instructor, Armored Corps, Israel Defense Force 2007 – 2009

Trained recruits, commanders and officers on the weapons control system of the Merkava Mark II tank.

Education

Ph.D., Neuroscience, UC Berkeley 2010 – 2016

National Science Foundation Graduate Research Fellow

B.A., Cognitive Science; Psychology, UC Berkeley 2003 – 2007

Highest Distinction in General Scholarship, Departmental Citation in Cognitive Science

Tools

Scala, git, Python, MATLAB, SQL, R, Lisp, Tableau, bash, HTML