

# Matar Haller

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## Experience

### **Director of Algorithmic AI, SparkBeyond, Netanya, Israel**

**2020-present**

- Integrated algorithmic AI into roadmap by advising and collaborating with product and engineering leaders.
- Lead the design, product, and architecture for a novel product component. Successful two-month POC culminated in the creation of a designated product track, with a UX/UI, product and engineering team. Product is currently part of the core user flow in the platform.

### **Algorithmic AI Team Lead, SparkBeyond, Netanya, Israel**

**2019-2020**

- Managed team of six AI Research Engineers to define, implement and execute the algorithmic core of the automated data science platform while adhering to Agile methodology and CI and QA standards.

### **AI Research Engineer, SparkBeyond, Netanya, Israel**

**2018-2019**

- Developed and implemented machine learning algorithms to power an automated research engine.
- Led team of SW engineers, UX/UI designers, and AI researchers to create and deliver a moonshot product in collaboration with XPRIZE researchers. Successful POC culminated in development of a product currently licenced to external clients, generating revenue for SparkBeyond.

### **Senior Data Scientist, SparkBeyond, Netanya, Israel**

**2017-2018**

- Led client engagements, provided technical training and fostered mentorship relationships with McKinsey consultants as well as with external, large-scale clients in the telecom, retail, healthcare and finance domains.
- Built relationships with business stakeholders to plan and execute data science partnerships that lead to long-term licencing agreements for the SparkBeyond platform.

### **Data Scientist, Winton Capital, San Francisco, CA**

**2016-2017**

- Engineered 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 for 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 a 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, regularized regression and nonparametric statistics to link neuronal activity with behavior. Published in *Nature Human Behavior*.
- Developed method for extracting oscillatory components from power spectra using regression, clustering, curve fitting and cross validation. Precision and recall match human performance. Published in *Nature Neuroscience*.
- Supervised and mentored research assistants and graduate students. Taught experimental design, electrophysiology recording, signal processing and data analyses.

## Projects

### **OKNLP**

**2016**

- Combined NLP (tf-idf, tokenization) with machine learning (non-negative matrix factorization, hyperparameter tuning) to analyze free text and demographic information from online dating profiles.
- Presented as a 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, Outstanding Graduate Student Instructor

**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, Jira