

# Aviv Bachan

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SUMMARY	I am a data scientist with a background in computational Earth Sciences.	
PROFESSIONAL EXPERIENCE	<b>Data Scientist, Argyle Data, SF</b>	<b>March 2017 – present</b>
	<ul style="list-style-type: none"><li>• Using machine learning tools (RNNs, XGBoost, iForest) to detect fraud in mobile phone data and predict customer retention.</li><li>• Munged over 70Gb of customer payment data using Pandas, Numpy, Scikit-Learn, and Dask. Developed recurrent neural network architecture in Keras to predict customer retention. Used embedding layers, time-distributed dense layers, and LSTM layers to perform sequence-to-sequence prediction. Used XGBoost to validate neural network performance and obtain feature importances. Used TSNE for visualization. Worked both locally and on remote servers with python scripts and Jupyter notebooks.</li></ul>	
	<b>Fellow at The Data Incubator, SF</b>	<b>Sep 2016 - Nov 2016</b>
	<ul style="list-style-type: none"><li>• TDI is a highly selective (4% admissions rate) data science bootcamp for Ph.D.'s looking to enter industry. Carried out multiple data science projects on topics such as social network analysis, time series modeling, distributed computing with Hadoop MapReduce &amp; Spark.</li></ul>	
	<b>Research Scientist &amp; Instructor, Stanford University</b>	<b>March 2015 - Present</b>
	<ul style="list-style-type: none"><li>• Developed and applied inverse modeling methods (Kalman filter, particle filters, MCMC) for data assimilation in geochemical models.</li><li>• Taught a graduate-level course on mathematical and computational methods. Wrote accompanying textbook – see personal website: <a href="http://avivbachan.weebly.com">avivbachan.weebly.com</a>.</li></ul>	
	<b>Postdoctoral Scholar, Penn State University</b>	<b>Feb 2013 - Feb 2015</b>
	<ul style="list-style-type: none"><li>• Developed computational model for estimating the impacts changing oxygen levels in the atmosphere. Results published in high impact journal.</li></ul>	
EDUCATION	Ph.D., Earth Sciences, Stanford University	<b>Sep 2007 – April 2013</b>
	Dual B.Sc. in Geological Sciences and Life Sciences, Ben Gurion University, Be'er Sheva, Israel	<b>Sep 2004 – July 2007</b>
OTHER	Fluent English, Hebrew. American-Israeli dual citizenship. Served 3 years in the Israeli Defense Forces. Interests: distance hiking, aikido.	