

Jonathan Rubin

- PhD in Computer Science with specialization in Artificial Intelligence during which I created a suite of computer poker players that won international competitions.
- Eight years experience working in industry research labs developing and prototyping machine/deep learning algorithms for applications in healthcare.
- Experience working with large data sets and generating insights using deep learning techniques. Interest in solving real-world problems at scale.

Technical Skills

Languages/Platforms Python, PyTorch, TensorFlow 2, R, MATLAB, Java

Libraries/Packages Pyro, PyMC3, WFDB, Scikit-learn, SciPy, Pandas, NumPy

Tools Docker, Git, Conda, Bash, Latex, AWS, GCP

Work Experience

Employer	Philips Research North America	Cambridge, MA
Job Title	Senior Scientist	
Period	August 2016 – Present	
	Developed deep learning algorithms to automatically analyze medical data including medical images and physiological waveforms for use in clinical decision support systems. Developed models to perform semantic segmentation of stroke lesions in 3D CT/MRI volumes. Developed deep learning models to automatically analyze arrhythmias in ECG waveforms. Developed deep learning models to automatically analyze findings in chest x-rays.	
Employer	MIT CSAIL (Computer Science and Artificial Intelligence Laboratory)	Cambridge, MA
Job Title	Research Affiliate	
Period	March 2018 – March 2020	
	ALFA Group: Anyscale Learning For All (http://alfagroup.csail.mit.edu) Utilized sequence-to-sequence LSTMs to perform unsupervised representation learning for prediction of acute hypotensive episodes. Applied distributed large scale feature extraction methods to physiologic waveform datasets.	
Employer	PARC, A Xerox Company	Palo Alto, USA
Job Title	Research Scientist	
Period	February 2012 – August 2016	
	Led development of cloud-based affective wearable system for pervasive and ubiquitous health management. Developed approaches for classifying pathologic versus non-pathologic states from physiologic time-series. Developed deep learning based models to recognize normal vs. abnormal heart sounds.	

Employer	The University of Auckland	Auckland, New Zealand
Job Title	Teaching Assistant / Lecturer	
Period	March 2004 – January 2012	
	Presented lectures and tutorials for core CS and artificial intelligence classes.	

Employer	Orion Health	Auckland, New Zealand
Job Title	Software Engineer	
Period	October 2007 – June 2008	
	Developed healthcare software using J2EE.	

Education

Degree	Doctor of Philosophy in Computer Science (PhD)	
University	The University of Auckland	Auckland, New Zealand
Thesis Title	On the Construction, Maintenance and Analysis of Case-Based Strategies in Computer Poker	
Period	March 2009 – December 2012	

Degree	Master of Science in Computer Science (MSc) with First Class Honours	
University	The University of Auckland	Auckland, New Zealand
Thesis Title	Casper: Design and Development of a Case-Based Poker Player	
Period	July 2006 – July 2007	

Degree	Bachelor of Science BSc(Hons) with First Class Honours	
University	The University of Auckland	Auckland, New Zealand
Specialization	Computer Science	
Period	July 2002 – June 2006	