

Daniel J. Saunders

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Education

M.S. Computer Science, University of Massachusetts, Amherst 2017–2019
Concentration: machine learning, computational neuroscience
GPA: 3.7

B.S. Computer Science, University of Massachusetts, Amherst 2012–2017
Concentration: theoretical computer science, artificial intelligence
GPA: 3.5

B.S. Mathematics, University of Massachusetts, Amherst 2012–2017
Concentration: mathematical computing
GPA: 3.5

Employment

Graduate Research Assistant Spring 2017–
Biologically Inspired Neural and Dynamical Systems Lab
Supervisor(s): Professors Robert Kozma and Hava Siegelmann

Data Science Intern Summer 2018
HealthcareSource
Supervisor(s): Patrick McDonough

Programmer Fall 2016–
Department of Resource Economics, University of Massachusetts, Amherst
Supervisor(s): Professors Christian Rojas and Debi Mohapatra

Research Intern Summer 2017
Air Force Research Lab Automatic Target Recognition Center
Supervisor(s): Dr. Roman Ilin and Professor Robert Kozma

Programmer Summer 2016
Biologically Inspired Neural and Dynamical Systems Lab
Supervisor(s): Dr. Hava Siegelmann

Programmer Summer 2015–Winter 2017
Cognition and Action Lab, University of Massachusetts, Amherst
Supervisor(s): Professor Rebecca Spencer

Software Development Intern
Epsilon
Supervisor(s): Patrick McDonough

Summer 2015

Awards

Bay State Master's Program (10% of tuition & fees)

2017–2019

Publications

PREPRINTS

1. H. Hazan, D. J. Saunders, H. Khan, D. T. Sanghavi, H. T. Siegelmann, and R. Kozma. BindsNET: A machine learning-oriented spiking neural networks library in Python. *ArXiv e-prints*, June 2018.

CONFERENCE ARTICLES

2. H. Hazan, D. J. Saunders, D. T. Sanghavi, H. T. Siegelmann, and R. Kozma. Unsupervised learning with self-organizing spiking neural networks. In *International Joint Conference on Neural Networks*, 2018.
3. D. J. Saunders, H. T. Siegelmann, R. Kozma, and M. Ruzinkó. Unsupervised learning with self-organizing spiking neural networks. In *International Joint Conference on Neural Networks*, 2018.

Software

1. BindsNET: A spiking neural networks simulation library built with PyTorch.
GitHub repo: <https://github.com/Hananel-Hazan/bindsnet>
D. Saunders, H. Hazan, and H. Khan.

Technical Skills

- Programming languages (ordered by decreasing proficiency): Python, Java, C/C++, MATLAB, SQL, JavaScript, Haskell
- Machine learning frameworks (ordered by decreasing proficiency): PyTorch, Scikit-Learn, Keras, Tensorflow, Theano, MatConvNet