Joseph L. Marino

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Education

California Institute of Technology 2014 - Present
Ph.D. in Computation and Neural Systems

University of Minnesota, Twin Cities 2010 - 2014
B.S. in Physics, Minor in Computer Science High Distinction

Work Experience

Cupitor Consulting Data Analyst
St. Paul, MN 2013 - 2014
Handled and analyzed client datasets for business valuation cases using Microsoft Access, Microsoft Excel, and SQL Server.

University of Minnesota Physics Department Tutor
Minneapolis, MN Fall 2013
Worked directly with students, helping them learn how to solve introductory physics coursework problems.

NOvA Lab Research Assistant
Minneapolis, MN 2011 - 2012
Helped design and build neutrino detectors for Fermilab's large-scale NOvA experiment.

Recent Projects

Taxonomic Curriculum Learning Feb. 2016 - Present
Developed a taxonomic variant of curriculum learning, in which data labels are trained on in a coarse to fine manner.

Fine-Grained Classification With Non-Expert Labels Jan 2016 - Mar. 2016
Developed a technique for improving fine-grained classification of objects using coarse data labels. Currently in submission.

Taxonomic Multi-Class Classification Sept. 2015 - Dec. 2015
Implemented taxonomic loss functions in deep networks for multi-class classification of objects.

Comparing Face Patches with Deep Neural Networks Mar. 2015 - Jun. 2015
Explored similarities in face representation between macaque IT cortex and deep convolutional neural networks.

Caged Multi-Electrode Arrays May 2013 - Aug. 2013
With Prof. Pine (Caltech), wrote analysis software and performed experiments stimulating and recording from neurons in caged multi-electrode arrays.

Relevant Coursework

Machine Learning: Introduction to Data Mining, Mathematical Modeling, Learning Systems, Neural Computation, Machine Learning and Data Mining, Advanced Topics in Machine Learning

Neuroscience: Introduction to Neuroscience, Introduction to Computation and Neural Systems, Brain Circuits, Topics in Systems Neuroscience, Introduction to Vision

Teaching

Teaching Assistant: Neural Computation (Caltech) Fall 2015

Recognition

NSF Graduate Research Fellowship Honorable Mention 2016
Kunzel Fellowship, Caltech 2014 - 2015
Dean's List, University of Minnesota 2010 - 2014
Summer Undergraduate Research Fellowship, Caltech 2013
Eagle Scout Award, Boy Scouts of America 2010