Jordan A. **Ott**

Machine Learning Researcher

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Research

Graduate Researcher
May 2017 - Current

Machine Learning and Assistive Technology Lab
Orange, CA

- Comparing the utility of weight sharing in biological systems to machine systems (convolutional neural networks)
- Applications of various machine learning techniques to predict subject's random binary actions in advance of movement with electroencephalogram scans of the brain
- Automatically tagging video frames that contain code, in programming tutorials, and transcribing it to text

Undergraduate Researcher
Aug. 2016 - May 2017

Machine Learning and Assistive Technology Lab
Orange, CA

- Unsupervised deep learning Remote Sensing model capable of separating clouds from satellite images
- Using LDA to analyze R source code and open source MATLAB functions, to better understand the topic space of scientific computing

Professional Experience

Graduate Research Intern
May 2017 - Aug. 2017

Aerospace Corporation
El Segundo, CA

- Deep Learning and High Performance Computing Research
- Predict coordinate location from images when GPS signal becomes unavailable
- Machine learning algorithms to detect anomalies in rocket launch data

Junior Software Engineer
May 2016 - Aug. 2016

Triple Ring Technologies
Newark, CA

- Embedded systems engineering on human implantable devices to monitor glucose levels in patients with Diabetes
- Developed internal repository tracking application, auto scheduling builds, reporting errors, logging changes
- Software modifications to blood pressure cuffs for medical research, blood oxygenation analysis

Technical Skills

- Python, Lua, R, Matlab, C++, Java, SQL
- Cuda, Caffe, Git, Keras, OpenCV, OpenMp, Tensorflow, Unix

Education

M.S. in Computational Data Sciences
Aug. 2017 - May 2018

Chapman University
Orange CA

- Thesis: "ReaderNet: A Reinforcement Learning Agent for Image to Text Transcription"

B.S. in Computer Science Magna Cum Laude
Aug. 2014 - May 2017

Chapman University
Orange CA

- Minor in Mathematics

Extracurricular Activity

President and Founder *Jan. 2016 - Mar. 2017*

Chapman Robotics *Orange, CA*

- RC car controlled by camera and Raspberry Pi to autonomously steer vehicle
- Create and train a convolutional neural network to steer a car through an environment
- Computer vision machine learning libraries: OpenCV, Tensorflow

Ambassador *Mar. 2016 - May 2017*

Leadership Council of Schmid College *Orange, CA*

- Collaborate with fellow ambassadors, Professors and the Dean
- Enhance the Science College of Chapman

Independent Projects

Relational Localization *February 2018*

- Ask a neural network relational questions: *"What person is farthest from the street light?"*
- The neural network correctly answers and localizes the correct person in the image

Neural Network Library *April 2017*

- Created a neural network library from scratch
- GPU compatible

MIT: Deep Learning for Self-Driving Cars Competition *Mar. 2017*

- Car steers through simulation traffic at 75 mph
- Ranked 6th in the world (as of August 2017)

CoreLogic Data Science Challenge *Jan. 2017*

- Determine if a given house address has an obstructed view of the ocean
- Invited to present to CoreLogic executive engineering team at Irvine headquarters

Coffee Robot *Mar 2016*

- Raspberry Pi and Camera
- Visually detect fullness of coffee pot then tweet status

Honors & Awards

Most Distinguished Undergraduate Nominee - Cheverton Award *2017*

- One of six undergraduates nominated

Outstanding Leadership Award *2017*

- Recognized for my work as president of Chapman Robotics

Outstanding student organization Nominee *2017*

- Chapman robotics was recognized as an outstanding student organization

Orange County Computer Club Scholarship *2017*

Ronald M. Huntington Scholarship Award Nominee *2017*

Publications

1. Nicholas LaHaye, Jordan Ott, Michael Garay, Hesham El-Askary, and Erik Linstead. Multimodal object tracking and image fusion using unsupervised deep learning methodologies. *American Geophysical Union*, In press, 2017
2. Jordan Ott, Erik Linstead, Nicholas LaHaye, and Pierre Baldi. Learning in the machine: To share or not to share? *In review for Neural Networks*, 2017
3. Jordan Ott, Abigail Atchison, Paul Harnack, Adrienne Bergh, and Erik Linstead. A deep learning approach to identifying source code in images and video. *To appear in MSR-2018*, 2018
4. Jordan Ott, Abigail Atchison, Paul Harnack, Natalie Best, Haley Anderson, Cristiano Firmani, and Erik Linstead. Learning lexical features of programming languages from imagery using convolutional neural networks. *To appear in ICPC-2018*, 2018