Oliver A. Hennigh

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SUMMARY

Enthusiastic machine learning researcher seeks opportunities to work on game changing open source projects.

EDUCATION

Bachelor of Science (Honors Participant)
Clarkson University, Potsdam, NY, 2011 to 2015
Major: Mathematics, Physics
GPA: 3.5
Awards: Presidential Scholar and Deans list

EXPERIENCE

Air Force Research Lab July 2015 to Dec 2016
Associate Mathematician
Rome, NY

- Developed Tensorflow code base for training and executing the You Only Look Once (YOLO) object detection on large scale Air Force datasets
- Managed GPU servers maintaining current builds of CUDA and deep learning libraries

SUNY Potsdam Undergraduate Research Experience (REU) Summer 2013
Undergraduate Researcher
Potsdam, NY

- Studied Quantum Walks to understand properties such as Perfect State Transfer (PST)
- Wrote heavily optimized code in C++ using the GSL library to simulate discrete quantum systems

OPEN SOURCE PROJECTS

- *Phy-Net*
  A first look at compressing the computation time of Lattice Boltzmann method Physics simulations with Neural Networks. Preliminary results indicate 200x speed ups for fluid flow simulations.
- *Paper Reimplementation of "Early Visual Concept Learning with Unsupervised Deep Learning"*
  Recreated results and explored different neural network architectures with more complex datasets.
- *Paper Reimplementation of "Action-Conditional Video Prediction using Deep Networks in Atari Games"*
  Tested method on more difficult datasets and extended results to compress Markov Decision Processes on small LSTMs.
- *Quantum Walk Simulator*
  Visualization tool for Continuous-time Quantum Walks.
- *Cude*
  3D heat diffusion simulation written in C++ with graphics using OpenGL.

(These projects and more at *http://github.com/loliverhennigh*)

COMPUTER SKILLS

Languages: Python, Juila, C/C++
Libraries: Tensorflow, Torch, GNU Scientific Library, OpenGl, FANN
Operating Systems: Linux
Hardware: TK1, TX1, Raspberry Pi

COURSES

- Graduate Topology (Point Set)
- Graduate Numerical Methods
- Quantum Physics
- Computer Graphics
- Neural Networks for Machine Learning (Hinton)