Jacob Manning

Computer engineering student focused on artificial intelligence

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jacobmanning@pitt.edu

EXPERIENCE

NASA Goddard Space Flight Center, Greenbelt, MD — *Artificial Intelligence and Machine Learning Intern*

JUNE 2017 - AUGUST 2017

Trained a deep neural network for detecting wildfires onboard a satellite

Created custom neural network framework in C to efficiently perform inference for feedforward neural networks on embedded platforms

NSF Center for High Performance Reconfigurable Computing, Pittsburgh, PA — *Undergraduate Researcher*

JANUARY 2017 - PRESENT

Study machine learning with focus on neural networks

Perform analysis of Convolutional Neural Networks for the Xilinx Zynq Ultrascale+ MPSoC

University of Pittsburgh Office of Residence Life, Pittsburgh, PA — *Resident Assistant*

AUGUST 2016 - PRESENT

Plan, organize, and execute initiatives in residence hall

Mentor a floor of 56 first–year engineering students

EDUCATION

University of Pittsburgh, Pittsburgh, PA — *BS, Computer Engineering*

AUGUST 2015 - MAY 2019

GPA: 3.79/4.00

Relevant coursework: Algorithms, Data Structures, Computer Organization and Assembly Language, Systems Software, Analysis of Electronic Circuits, Digital Laboratory

PROJECTS

Visualizing MNIST — *Python*

Feedforward neural network that allows user to see the image input to the network and the predicted class output in real time

Iris classifier — *Python*

Logistic regression classifier to preprocess data, train, and test model

Boggle solver — *Java*

Find all words that can be constructed from a given square board of letters using recursive backtracking

PROGRAMMING LANGUAGES

C/C++, Python, Java, MATLAB, HTML/CSS, MIPS, JavaScript, Julia

INDEPENDENT STUDY

Andrew Ng's "Introduction to Machine Learning"

Michael Nielsen's "Neural Networks and Deep Learning" online textbook

Google's "Deep Learning" udacity course

Stanford University CS231n "Convolutional Neural Networks for Visual Recognition" (in progress)

RECOGNITION

Eagle Scout Boy Scouts of America, 2012

National Semifinalist, SIAM Moody's Mega Math Challenge top 18% of teams in applied mathematics competition, 2015

Swanson School of Engineering Honor Student awarded every undergraduate semester, 2015 – present

University of Pittsburgh Emerging Leaders Program ten week program to develop leadership acumen, 2015

Resident Assistant of the Month excellent performance in September, 2016

Social Program of the Year executed premier social engagement program at University of Pittsburgh, 2017

Projects available online at **jacobmanning.github.io** or **github.com/jacobmanning**