

Jacob Manning

Computer engineering student focused on artificial intelligence

*address and phone number
intentionally omitted online,
please contact by email*
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EXPERIENCE

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

JUNE 2017 - PRESENT

Help develop and train a deep neural network for detecting wildfires

Responsible for building preprocessing routines, generating appropriate training sets, and determining network performance

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

JANUARY 2017 - PRESENT

Study machine learning with focus on neural networks

Write parallel C/C++ using OpenMP to improve stereovision application performance by 1.7x

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: Data Structures, Computer Organization and Assembly Language, 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, and view results for iris data set using TensorFlow and TensorBoard

Boggle solver — *Java*

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

PROGRAMMING LANGUAGES

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

INDEPENDENT STUDY

Andrew Ng's "Introduction to Machine Learning"

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

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

Google's "Deep Learning" udacity course (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