

Ryan McCormick

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EDUCATION

Binghamton University, State University of New York, Watson School of Engineering
Bachelor of Science in Computer Science & Bachelor of Arts in Mathematics

Expected: May 2019
GPA: **3.93/4.00**

SKILLS

Languages: Python, C++, Bash, MATLAB, C, Java, LaTeX, HTML/CSS

Software/OS: Anaconda, Git, Make, HPC, GDB; Vim, Atom, Visual Studio; Arch Linux, Ubuntu, Debian, CentOS

PROFESSIONAL EXPERIENCE

Machine Learning Intern, Air Force Research Lab - Sensors Directorate

May '17 - Aug '17

- Utilized Python and MATLAB to create graphical and statistical models of trained convolutional neural networks
- Functionalized MATLAB code to allow flexible training on arbitrary number of classes for better code reusability
- Wrote bash scripts for generating variably-sized config files of randomly sampled classes from Stanford dataset
- Developed and posted heavily-commented HPC scripts to DOD Wiki to assist current/future interns new to UNIX

PUBLICATIONS

Real-Time Sign Language Classification using the Leap Motion

Jan '16 - Jan '17

- Wrote a conference paper on tracking and classifying hands in 3D space with the Leap Motion Controller
- Outperformed state of the art accuracy on a given dataset by 18.5% with our features in real-time using C++
- **Published a 4-page research paper at IEEE International Conference on Image Processing 2017**

PROJECT EXPERIENCE

Mini-Shell

Oct '17 - Nov '17

- Created a simplified UNIX shell using interprocess communication with system calls in C
- Implemented unique commands such as *listjobs*, *fg*, *exit*, *cd*, and *pwd* while other commands handled by *execvp()*

Pokéfetch

Apr '17 - Sep '17

- Wrote CLI application to web-scrape for important stats on any pokémon with Python/BeautifulSoup
- Application outputs information and pokémon sprite side-by-side in "Neofetch" style to UNIX command-line

Dijkstra's Map

May '17

- Implemented Dijkstra's shortest path algorithm in C++ for a map of cities organized in a grid-like fashion
- Program reads input file describing the map and finds the best route from any city to any other in the map

TwitterStocks

Mar '17

- Developed script that scrapes Twitter for keywords and company stock ticker symbol using Python-Twitter API
- Implemented simplified sentiment analysis to tally positive/negative keywords and predict price trend for next day

Where's Waldo 3D

Nov '16

- Worked in a team of 3 to create a Microsoft HoloLens app in 24 hours at HackAE
- Learned Unity3D to create a Where's Waldo hide-and-seek game in Augmented Reality with spatial sound

LEADERSHIP EXPERIENCE

HackBU, Organizer, Binghamton University

Apr '17 - Present

- Present and brainstorm topics for weekly computer science workshops like Machine Learning and web-scraping
- Organize hackathons and reach out to potential sponsors to secure funding

ACM Student Chapter, Binghamton University

Jan '16 - Present

- Attend weekly meetings on solutions to HackerRank and ICPC challenges
- Placed 3rd in February 2017 programming competition out of 25 contestants

Guest Speaker, Binghamton High School

Apr '17

- Demonstrated introductory concepts to local HS students through Pygame and HTML with GitHub Pages

Physics Teaching Assistant, Binghamton University

Aug '16 - Jan '17

- Taught lab of ~24 students on Calculus-based Kinematics/Thermodynamics topics with weekly graded quizzes