KEITH CAROLUS

84 Dirkson Avenue; Buffalo, NY 14224

EDUCATION

Computer Engineering, Bachelor of Science
University at Buffalo | 2018 (expected)
3.72 GPA - Minor in Mathematics

General Education
Jamestown Community College | 2014
3.81 GPA - 53 credits obtained while in high school

WORK EXPERIENCE

Research Laboratory (AFRL)
Griffiss Institute Intern | *May 2017 – Present*

- Developed highly accurate deep convolutional neural networks for image classification
- Implemented adversarial example generation techniques, improved model robustness
- Currently writing an IEEE style paper for publication

Buffalo Neuroimaging Analysis Center (BNAC)
Undergraduate Research Assistant | *February 2015 – Present*

- Develop projects investigating multiple sclerosis pathology via MRI
- Design analyses, utilize high performance computing and machine learning techniques

  Achievements:
  - Awarded grant for computer technology upgrade in the Kenneth M. Alford Medical Education Center
  - Co-author of 6 accepted conference abstracts to Neurology, IMSCOGS, ECTRIMS-ACTRIMS
  - Co-author of manuscript under review, further publications to come

Empire Genomics
ISFTP Fellow | *Summer 2016*

- Developed information management system for cytogenetic testing, integrated into company intranet (LAMP stack)
- Began developing multiple myeloma bioinformatics project relying on 1,000 patient NIH database with Dr. Jianxin Wang from the UB Center for Computational Research

University at Buffalo, Department of Computer Science and Engineering
Undergraduate Teaching Assistant | *September 2015 – Present*

- Support Computer Organization and Introduction to Computer Science I and II
- Teach weekly recitations to approximately 100 students to review material and assist with course projects
- Hold open office hours, provide review sessions, and invigilate examinations

SELECT PROJECTS

- SmallPond FPGA based architecture assembler, debugger, and simulator for CSE 443: Compilers (current)
- TaDa web app for productivity, a Trello/Google Calendar hybrid (current)
- First Place, UB CS Ed Week Demo competition, Arduino LED connect four with Android bluetooth controller
Additional projects on GitHub

TECHNICAL SKILLS

Platforms:	Linux, Windows, OS X, Android
Languages:	Python, R, Java, C/C++, Javascript, PHP
Frameworks:	Caffe, Tensorflow
Applications:	Eclipse, PyCharm, Android Studio, Microsoft Office
Other:	Jupyter/IPython, Git, MATLAB, SPSS, LaTeX, HTML/CSS, SQL (MySQL), JUnit

EXTRACURRICULAR ACTIVITIES

- Selected member of Department of Computer Science and Engineering Undergraduate Student Advisory Board
- Member of the American Physician Scientists Association
- Peer reviewer, IMPULSE Journal of Neuroscience
- Recommended and selected for Spark, the University at Buffalo's scholarship preparation program
- Member of the University at Buffalo Honors College and Honors Peer Mentor for freshman engineering Honors students
- Member of ACM and IEEE, participate in skills building workshops and social events including UB Hacking
- Previous Cornell University Cooperative Extension mentor for high risk youth - encourage interest in STEM