

# Brandon Amos

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## Education

- Ph.D. in Computer Science, Carnegie Mellon University Aug 2014 – Present
- M.S. in Computer Science, Carnegie Mellon University Aug 2014 – May 2016
- B.S. in Computer Science, Virginia Tech (3.99/4.00) Aug 2011 – May 2014
- Northside High School (Roanoke, Virginia) May 2011

## Research Experience

- Carnegie Mellon University, Prof. Zico Kolter Apr 2016 – Present
  - Machine learning and optimization
- Carnegie Mellon University, Prof. Mahadev Satyanarayanan Aug 2014 – Apr 2016
  - Machine learning, computer vision, and mobile computing
- Virginia Tech, Prof. Jules White May 2012 – May 2014
  - Mobile computing, cyber-physical systems, and security
- Virginia Tech, Prof. Layne Watson Jan 2013 – May 2014
  - Scientific computing, global/stochastic optimization, and bioinformatics
- Virginia Tech, Prof. Binoy Ravindran Nov 2012 – Mar 2014
  - Heterogeneous compilers

## Selected Publications

- [1] **B. Amos**, L. Xu, J. Z. Kolter, "Input convex neural networks," *ArXiv preprint arXiv:1609.07152*, 2016. [Online]. Available: <http://arxiv.org/abs/1609.07152>.
- [2] H. Zhao, T. Adel, G. Gordon, **B. Amos**, "Collapsed Variational Inference for Sum-Product Networks," in *ICML*, 2016. [Online]. Available: <http://www.cs.cmu.edu/~hzhao1/papers/ICML2016/BL-SPN-main.pdf>.
- [3] **B. Amos**, B. Ludwiczuk, M. Satyanarayanan, "Openface: A general-purpose face recognition library with mobile applications," Technical Report CMU-CS-16-118, CMU School of Computer Science, Tech. Rep., 2016. [Online]. Available: <http://reports-archive.adm.cs.cmu.edu/anon/anon/2016/CMU-CS-16-118.pdf>.
- [4] **B. Amos**, D. Easterling, L. Watson, W. Thacker, B. Castle, M. Trosset, "QNSTOP-QuasiNewton Algorithm for Stochastic Optimization," 2014. [Online]. Available: <https://vtechworks.lib.vt.edu/bitstream/handle/10919/49672/qnTOMS14.pdf>.

## Teaching Experience

- Distributed Systems (CMU 15-440/640), TA S2016
- Software Design and Data Structures (VT CS 2114), TA S2013

## Industry Experience

- Data Scientist Intern, Adobe Research May 2014 – Aug 2014
- Software Engineer Intern, Snowplow Analytics Dec 2013 – Jan 2014
- Software Engineer Intern, Qualcomm May 2013 – Aug 2013

- Software Engineer Intern, Phoenix Integration May 2012 – Aug 2012
- Network Administrator Intern, Sunapsys Jan 2011 – Aug 2011

## Honors & Awards

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- NSF Graduate Research Fellowship 2016 – 2019
- 1st Place Undergraduate Senior Capstone Award, Virginia Tech Computer Science 2014
- David Heilman Research Award, Virginia Tech Computer Science 2014
- Senior Scholar Award, Virginia Tech Computer Science 2014
- Honorable Mention, CRA Outstanding Undergraduate Researcher Award 2014
- Awarded eight undergraduate merit scholarships 2011 – 2014

## Skills

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Languages	Bash, C, C++, CSS, Fortran, Haskell, HTML, Java, JavaScript, $\text{\LaTeX}$ , Lua, Make, <i>Mathematica</i> , Python, R, Scala
Frameworks	Akka, Android SDK/NDK, Caffe, Node.js, NumPy, TensorFlow, Torch7, Pandas, SciPy, scikit-learn, Spark, Spray
Systems	Linux, OSX