

# brandon amos. r  sum  .

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<http://bamos.io>

INTERESTS	<b>Compiler, mobile, or security</b> research or development in <b>Linux</b> . Seeking a PhD fellowship starting May 2014 or internship from May–August 2014.
EDUCATION	<b>Virginia Polytechnic Institute and State University</b> Blacksburg, Virginia <i>B.S. Computer Science, in Honors. Mathematics minor.</i> <b>August 2011 – May 2014</b> • <b>Overall GPA:</b> 3.98/4.00 <b>Major GPA:</b> 4.00/4.00 • <b>Thesis:</b> Evaluating machine learning approaches to runtime mobile malware detection techniques.
RESEARCH EXPERIENCE	<b>Virginia Tech Computer Science Department</b> Blacksburg, Virginia <i>Undergraduate Research Assistant, Advisor - Dr. Layne Watson</i> <b>January 2013 – Present</b> • Optimization algorithm in <b>Fortran 95</b> resulting in primary authorship on a conference publication.  <b>Systems Software Research Group</b> Blacksburg, Virginia <i>Undergraduate Research Assistant, Advisor - Dr. Binoy Ravindran</i> <b>November 2012 – Present</b> • Automatic <b>OpenMP</b> to <b>CUDA</b> translation using <b>C++</b> and the <b>ROSE</b> compiler framework. • <b>Scala</b> and <b>Bash</b> development in <b>Linux</b> .  <b>Magnum Research Group</b> Blacksburg, Virginia <i>Undergraduate Research Assistant, Advisor - Dr. Jules White</i> <b>May 2012 – Present</b> • Android <b>malware detection research</b> resulting in primary authorship on a conference publication. • Created a distributed <b>Actor</b> system using <b>Scala</b> for <b>machine learning</b> classification of APKs. • <b>C++</b> , <b>Make</b> , and <b>Android source</b> development in <b>Linux</b> .  <b>Qualcomm, Inc.</b> San Diego, California <i>Source Integrity Team Software Intern</i> <b>May 2013 – August 2013</b> • <b>js</b> , <b>C++</b> , and <b>Python</b> development in <b>Linux</b> .  <b>Phoenix Integration, Inc.</b> Blacksburg, Virginia <i>Software Engineer Intern</i> <b>May 2012 – August 2012</b> • Industrial software development using <b>VC++</b> , <b>VC#</b> , <b>Java</b> , <b>Tomcat</b> , <b>JUnit</b> , <b>NUnit</b> , <b>Ant</b> , and <b>Make</b> .  <b>Sunapsys, Inc.</b> Vinton, Virginia <i>Network Administrator Intern</i> <b>January 2011 – August 2011</b> • <b>Linux</b> server configuration and <b>Bash</b> development.
CONFERENCE PUBLICATIONS	• “Applying machine learning classifiers to dynamic Android malware detection at scale.” <b>Brandon Amos</b> , Hamilton Turner, Jules White. <i>IWCMC’13 Security, Trust, and Privacy Symposium</i> . Cagliari, Italy, July 2013. • “Fortran 95 implementation of QNSTOP for global and stochastic optimization.” <b>Brandon Amos</b> , David Easterling, Layne Watson, Brent Castle, Michael Trosset, William Thacker. <i>Submitted</i> .
SKILLS	<b>Preferred Tools:</b> Linux <sup>***</sup> , vim/gdb <sup>***</sup> , git <sup>***</sup> , Make <sup>**</sup> <b>Languages:</b> Bash <sup>**</sup> , C/C++ <sup>**</sup> , C# <sup>*</sup> , Fortran <sup>**</sup> , HTML/CSS <sup>*</sup> , L <sup>A</sup> T <sub>E</sub> X <sup>**</sup> , Java <sup>**</sup> , JavaScript <sup>**</sup> , <i>Mathematica<sup>**</sup>, PHP<sup>*</sup>, Python<sup>***</sup>, R<sup>*</sup>, Scala<sup>**</sup></i>
HONORS & AWARDS	• Honorable Mention, CRA Outstanding Undergraduate Researcher Award, 2013 • Sophomore Scholar Award, Virginia Tech Computer Science, 2013 ◦ Given to the sophomore in Computer Science with the most outstanding academic record. • Intelligence Community Center of Academic Excellence Scholar, Virginia Tech, 2012–2013 ◦ Merit-based scholarship providing a security-based research fellowship. • Engineering Merit Scholarship, Roanoke County Public Schools Education Foundation, 2011 ◦ Merit-based scholarship presented annually to one student in the graduating Engineering class. • Pamplin Leader Scholarship, Virginia Polytechnic Institute and State University, 2011 ◦ Merit-based scholarship presented to one student from each public high school in Virginia.
PROJECTS	<b>Personal Blog and Website</b> – <a href="http://bamos.github.io">http://bamos.github.io</a> <b>July 2012 – Present</b> • <b>27 posts</b> across the following tags, listed by highest frequency. Python, Bash, LaTeX, Linux, Scala, Android, Mathematica, C++, Fortran, CUDA  <b>GitHub Portfolio</b> – <a href="http://github.com/bamos">http://github.com/bamos</a> <b>April 2011 – Present</b> • Hosts code samples, original source code, and patches for open source projects.