# brandon amos. rèsumè.

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http://bamos.io

**Interests**

**Compiler**, **mobile**, or **security** research or development in **Linux**.
Seeking a PhD fellowship starting May 2014 or internship from May–August 2014.

**Education**

**Virginia Polytechnic Institute and State University** — Blacksburg, Virginia
*B.S. Computer Science, in Honors. Mathematics minor.* — **August 2011 – May 2014**
- **Overall GPA:** 3.98/4.00 — **Major GPA:** 4.00/4.00
- **Thesis:** Evaluating machine learning approaches to runtime mobile malware detection techniques.

**Research Experience**

**Virginia Tech Computer Science Department** — Blacksburg, Virginia
*Undergraduate Research Assistant, Advisor - Dr. Layne Watson* — **January 2013 – Present**
- Optimization algorithm in **Fortran 95** resulting in primary authorship on a conference publication.

**Systems Software Research Group** — Blacksburg, Virginia
*Undergraduate Research Assistant, Advisor - Dr. Binoy Ravindran* — **November 2012 – Present**
- Automatic **OpenMP** to **CUDA** translation using **C++** and the **ROSE** compiler framework.
- **Scala** and **Bash** development in **Linux**.

**Magnum Research Group** — Blacksburg, Virginia
*Undergraduate Research Assistant, Advisor - Dr. Jules White* — **May 2012 – Present**
- Android **malware detection research** resulting in primary authorship on a conference publication.
- Created a distributed **Actor** system using **Scala** for **machine learning** classification of APKs.
- **C++**, **Make**, and **Android source** development in **Linux**.

**Industry Experience**

**Qualcomm, Inc.** — San Diego, California
*Source Integrity Team Software Intern* — **May 2013 – August 2013**
- **js**, **C++**, and **Python** development in **Linux**.

**Phoenix Integration, Inc.** — Blacksburg, Virginia
*Software Engineer Intern* — **May 2012 – August 2012**
- Industrial software development using **VC++**, **VC#**, **Java**, **Tomcat**, **JUnit**, **NUnit**, **Ant**, and **Make**.

**Sunapsys, Inc.** — Vinton, Virginia
*Network Administrator Intern* — **January 2011 – August 2011**
- **Linux** server configuration and **Bash** development.

**Conference Publications**

- "Applying machine learning classifiers to dynamic Android malware detection at scale."
  **Brandon Amos**, Hamilton Turner, Jules White.
  *IWCMC'13 Security, Trust, and Privacy Symposium.* Cagliari, Italy, July 2013.
- "Fortran 95 implementation of QNSTOP for global and stochastic optimization."
  **Brandon Amos**, David Easterling, Layne Watson, Brent Castle, Michael Trosset, William Thacker.
  *Submitted.*

**Skills**

**Preferred Tools:** Linux***, vim/gdb***, git***, Make**
**Languages**: Bash**, C/C++**, C#*, Fortran**, HTML/CSS*, LaTeX**, Java**, JavaScript**, *Mathematica*, PHP*, Python***, R*, Scala**

**Honors & Awards**

- Honorable Mention, CRA Outstanding Undergraduate Researcher Award, 2014
- 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 cyber-security 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**

**Personal Blog and Website** – http://bamos.io — **July 2012 – Present**
- **27 posts** across the following tags, listed by highest frequency.
  Python, Bash, LaTeX, Linux, Scala, Android, Mathematica, C++, Fortran, CUDA

**GitHub Portfolio** – http://github.com/bamos — **April 2011 – Present**
- Hosts code samples, original source code, and patches for open source projects.