**Objective**   
Find internships that combine security research with development. Learn more about creating security scanning tools.

# Education

## Tufts University, Medford MA

Bachelor of Science in Computer Science, 2013

**Research** -Computer Science (September 2009 – Present)Apply social networking partitioning algorithms and graph theory to metabolic networks to help determine the effectiveness of delivered drugs to the liver. Create efficient algorithm to count cycles in a directed graph.

**Relevant Coursework**Machine Structure and Assembly in C (also **TA**), Discrete Mathematics, Web Programming, Computational Theory, Data structures in C++ (also **TA**), Machine Learning (Fall 2011), Algorithms (Fall 2011)

# Experience

## Microsoft Seattle, WA SDET May– September 2011

* Create IDN Scanner to detect confusing URLs registered by third parties.
* Develop competitive automated security testing tools to detect vulnerabilities (XSS, open redirect, null byte injection, etc). C# development with SQL backend.
  + Highly performance oriented (<1 second per URL)
  + High level reporting and web user interface (AJAX, HTML5, ASP.NET)
  + Low false positive rate (<6%)

## Emma, Inc. Nashville, TN Systems Administrations Intern April – September 2010

* Systems Administration: Shell and Bash script programming, server installation, network anaylsis.
* Network Security: Nessus security scans, Nmap network scans, SQL injection, DVWA exploitation.

## General Intern / Systems Administrations Intern May – September 2009

* Security flaw detection and management with Nmap and Nessus.
* Automated security report generation with Cronjobs and Apache web framework..

## Development Intern May – August 2007

* Created a visual representation of consumer location and density using Google Maps API, PHP, and PostresSQL.

## University School of Nashville Computer Courses Nashville, TN 2007 – 2010 Founder, Head Instructor

* Initiated computer education for rising 5th through 9th graders. Lead teacher in Flash, Photoshop, Web Design, Lego Robotics, Programming (with Robocode and Python), Alice, and Film classes.
* Managed employees, business assets, advertising, and customer relations.
* Developed a profitable small business that is now in its 4th year.

# Activities

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| * Defcon/B-Sides Attendee (2011) * Unix Systems Administrator (2009 - Present) * WMFO Exec Board – Ops Director (2009 - Present) * Lost Boys of Sudan Volunteer and Technical Director (2005 - 2009) | * Security Research, Pentesting * Private Pilot Training (2010 - Present) * DJ (2005 -Present) * Traveling Treasure Trunk Children’s Theater (2010 - Present), |