

Nicholas L. Farnan

University of Pittsburgh
Department of Computer Science
Sennott Square
Pittsburgh, PA, 15213

Phone: (412) 624-7253
Email: nlf4@cs.pitt.edu
Homepage: <http://www.cs.pitt.edu/~nlf4>

Education

Ph.D. Computer Science
Adviser: Adam J. Lee

University of Pittsburgh
January 2008 - Present.

B.S. Computer Science
Minor in Japanese
Overall GPA: 3.52 Computer Science GPA: 3.73

University of Pittsburgh
August 2004 - December 2007.

Research Interests

My research is focused on computer security and privacy. I hope that my work in these areas can provide Internet users with better control over their digital privacy and a safer online community to participate in. To these ends, I have worked on botnet detection, distributed denial of service attack mitigation, trust management, and privacy in distributed database systems.

Publications

Nicholas L. Farnan, Adam J. Lee, Panos K. Chrysanthis
"Don't Reveal My Intension: Protecting User Privacy Using Declarative Preferences during Distributed Query Processing"
in Proceedings of the 16th European Symposium on Research in Computer Security (ESORICS 2011), September 2011.

Nicholas L. Farnan, Adam J. Lee, and Ting Yu
"Investigating Privacy-Aware Distributed Query Evaluation"
in Proceedings of the Ninth ACM Workshop on Privacy in the Electronic Society (WPES 2010), October 2010.

José Brustoloni, Nicholas L. Farnan, Ricardo Villamarín-Salomón, David Kyle.
"Efficient Detection of Bots in Subscribers' Computers"
in Proceedings of the IEEE International Conference on Communications (ICC 2009), June 2009.

Peter Djalaliev, Muhammad Jamshed, Nicholas L. Farnan and José Brustoloni.
"Sentinel: Hardware-Accelerated Mitigation of Bot-Based DDoS Attacks"
in Proceedings of the 17th IEEE Intl. Conference on Computer Communications and Networks (ICCCN 2008), August 2008.

Employment

Graduate Research Assistant University of Pittsburgh, Department of Computer Science
January 2008 - Present

Early in my graduate career, I investigated methods of distributed denial of service attack mitigation through federated authentication. My current projects include designing efficient evaluation mechanisms for trust management policies expressed in the CTM policy language and protecting the privacy of users who issue queries to distributed database systems.

Undergraduate Researcher University of Pittsburgh, Department of Computer Science
May 2007 - January 2008

As an undergraduate, my research was focused on detection of botnets and mitigation of the attacks they are able to launch. I created a testbed to safely run unidentified pieces of malware on actual hardware and archive all of the network traffic that was generated, and co-authored software to detect the presence of malware participating in a botnet by looking only at the DNS traffic generated by it's host computer.

Teaching Assistant University of Pittsburgh, Department of Computer Science
August 2006 - Present

Data Management University of Pittsburgh, School of Nursing
March 2006 - August 2006

Maintained backups of medical research data and decommissioned old computers still containing patient medical data. I also acquired the necessary HIPPA certifications for performing these tasks.

Teaching Experience

I was in charge of leading weekly recitations or labs and grading the following courses:

CS0007: Introduction to Programming in Python Fall 2009

Fall 2009 was the first time this course had been done using Python. As such, I was able to take on the additional duties of completely designing several lab sessions. As an example, in one such the students were given the goal of creating an RSS feed parser and instructed to search the Internet for a suitable Python module for the task, as well as it's documentation. This lab session illustrated to the students how to go about finding and using new Python modules to solve interesting real-world problems.

CS1502: Formal Methods in Computer Science Spring 2009

CS1666: Principles of Computer Game Design and Implementation Fall 2008

Fall 2008 was the first running of this course, and as such, I was able to design some aspects of the course and the term project. The course was offered again in Fall 2009, and though budget restrictions could not allow for a TA, I still assisted in fine-tuning the design of the course for its second run, taught recitations when the professor was unavailable, and provided additional support to the students.

CS1501: Algorithm Implementation Spring 2008