**Michael K. Mabey**

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**EDUCATION**

**PhD Computer Science, Information Assurance** Tempe, AZ

Arizona State University GPA 3.81 May 2016

**M.S. Computer Science, Information Assurance** Tempe, AZ

Arizona State University GPA 3.58 August 2011

Thesis: Collaborative Digital Forensics: Architecture, Mechanisms, and Case Study

**B.S. Computer Science, Information Systems** Logan, UT

Utah State University GPA 3.25 May 2009

**SKILLS**

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| Digital Forensics | Python | C++ | HTML + CSS |
| Cloud Computing | Virtualization | PHP | MySQL/phpMyAdmin |

**WORK EXPERIENCE**

**Research Assistant** Tempe, AZ

Security Engineering for Future Computing (SEFCOM) Lab, ASU Nov 2009 – Present

Advisor: Prof. Gail-Joon Ahn

Sponsors: Department of Energy and National Science Foundation.

* Recipient of the Information Assurance Scholarship Program (IASP) from the Department of Defense for the 2012-2013 and 2013-2014 school years.
* Developed an approach to acquire a suspect’s email from a web client by reestablishing persistent cookie sessions stored by a browser. Wrote an accompanying Python script that used Selenium to then interact with the online email account.
* Designed and implemented the core components of a modular, highly scalable, collaboration-centric digital forensic framework built on the OpenStack cloud architecture. Functions of the components included distributed job scheduling, storage management, and concise evidence representation and transmission.
* Set up and maintained a virtual private network (VPN) using OpenVPN for allowing remote access to lab equipment by members of the SEFCOM lab.
* Acted as a mentor for an undergraduate student that otherwise would not have pursued a master’s degree, and collaborated with him on research for his thesis.
* Researched methods for performing forensic acquisition on Android devices.
* Leader and deployment point of contact of the 2009 and 2010 ASU teams in the International Capture the Flag competition sponsored by University of California, Santa Barbara.

**Teaching Assistant** Tempe, AZ

Arizona State University Aug 2010 – Present

* Instructor for FSE 100, Introduction to Engineering multiple semesters: Fall 2011, Spring 2012, Fall 2012, Spring 2013, and Fall 2013.
* Spring 2011: Assistant to Dr. Gail-Joon Ahn for CSE 467 Data & Information Security.
* Fall 2010: Assistant to Dr. Gail-Joon Ahn for CSE 465 Information Assurance.

**Graduate Student Summer Intern** Albuquerque, NM

Sandia National Laboratories May 2011 – Jul 2011

* Helped design a dynamic malware analysis framework built on OpenStack that allowed incident responders to define highly customizable analysis environments and use arbitrary analysis tools in either triage or manual analysis mode.
* Wrote Python scripts to automate the setup process for using a SheevaPlug computer as a wireless intrusion detection agent running Kismet.

**Graduate Student Recruitment Specialist/Webmaster** Logan, UT

Electrical & Computer Engineering Department, USU Jul 2006 – Aug 2009

* Primary responsibilities included maintaining and augmenting the department website using PHP, MySQL, and other basic web technologies like CSS, JavaScript, and an SMTP server.
* Replaced a MS Access database by porting the old data to a MySQL server and creating a set of Python programs with the Dabo framework that interfaced with the database.
* Wrote Python scripts to convert tab-delimited and Excel formatted data to SQL entries.
* Responded to inquiries from potential domestic and international graduate students.

**RELEVANT SCHOOL PROJECTS**

* Implemented Python scripts that interpreted MBRs and boot sectors for FAT file systems.
* Wrote a program in Python to scan C and C++ source files for commonly used but insecure function calls, which then suggested to the user more secure yet equivalent library functions.
* Created a web-based interactive learning module designed to teach basic principles of password strength and symmetrical encryption using Python, JavaScript, and Ajax.
* Wrote a program in C++ that accepted a file containing cipher text created with a symmetrical encryption algorithm and attempted to discover the original key and plain text.
* Demonstrated a buffer overflow attack on a C++ program using gdb.
* Configured a Linux machine to be a DNS server, a DHCP server, and a web server that used SSL and authentication via htaccess rules.
* Set up a basic logging system in Linux with Snort and syslog.

**REFERENCES**

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| --- | --- |
| **Dr. Gail-Joon Ahn**  Title: Associate Professor in Computer Science and Engineering Department at ASU  Relation: Faculty Advisor and Supervisor in the SEFCOM Lab since Nov 2009  Phone: 480-965-9007  Email: [Gail-Joon.Ahn@asu.edu](mailto:Gail-Joon.Ahn@asu.edu) | **Dr. Chad Mano**  Title: Former Assistant Professor in the Computer Science Department at USU  Relation: Computer Security teacher from Aug 2008 – May 2009  Phone: 435-797-0959  Email: [chad.mano@usu.edu](mailto:chad.mano@usu.edu) |