

Marc Alexander Kowtko

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Education

Pace University, Seidenberg School of Computer Science and Information Systems

Bachelor of Science in Information Technology (Honors)

Concentrations: Computer Security, Networking

Minors: Criminal Justice, Law

Pleasantville, NY

Graduation May 2014

GPA: 3.68/4.00

Pace University, Seidenberg School of Computer Science and Information Systems

Masters of Science in Information Systems (Part-time)

White Plains, NY

Expected Graduation May 2018

Technical Summary

Operating Systems:	Windows XP, 7, Server 2003/2008, UNIX, Debian/Ubuntu, Fedora, CentOS, Kali Linux
Networking:	TCP/IP Suite, configure a local network, OSI Model, VPN & VLAN, Linux tools
Security applications and Tools:	Nessus, Nikto, Wireshark, BackTrack, Drupal, Host/Network Intrusion Detection Systems
Computer Science Languages:	XHTML/CSS, MySQL, Visual Basic.NET, Java,
Pursuing Certifications:	CISSP, CIPP/US
Software Tools:	MS Office Suite & Access, MS Project, MS Visio, Netbeans IDE, & LexisNexis Advance
Areas of Knowledge:	OSINT, Legal Investigations Procedures, PCI-DSS, HIPAA/HITECH compliance

Research and Internship Experience

New York State Office of the Attorney General (NYAG)

Technologist

New York, NY

December 2014 – present

- Conduct and Assist in high-profile security breaches affecting New York and national enterprises through analysis of detailed forensic and PFI reports, appropriate recommendations for cybersecurity incidents with NYAG and defendant legal counsel.
- Execute strategic visions and objectives through collection, organization, and research regarding the development of open source intelligence (OSINT) with particular focus in criminal fraud activities involving the Dark Web.
- Provide technical and communicate investigative results of subpoenaed evidence including incident response/forensic processes.
- Drafted legal documents including spreadsheets, subpoena(s), subpoena deficiency letters, Assurance of Discontinuance(s), and settlement agreements with particular focus on Data Loss Prevention (DLP) and security incident mitigation.
- Examine network data transmissions, traffic flows, mobile application and web source code to identify malicious activity through use of digital forensic and open source security penetration tools.
- Apply critical thinking and decision-making recommendations regarding New York State internet related legislation and policies.

Independent Security Research (*post-graduate*)

New York, NY

Sole Proprietor

December 2014 – present

- Conduct Independent and Original security research in current areas including Open Source Intelligence (OSINT), Maritime Electronics and Radar Security, and Dark Web intelligence with specialization in international crime and terrorism.

Pace University

Briarcliff Manor, NY

Part-time Paraprofessional Technician /Full Time Graduate Assistant – Financial Information Systems

June 2014 – December 2014

- Assist with management/administration of Kronos, ERP systems, and financial auditing programs and databases to ensure financial compliance.
- Assist with the research, development, deployment and policy guidelines of financial information management systems.

Philips North America

Briarcliff Manor, NY

Payment Card Industry Analyst Intern

January 2014 – May 2014

- Review policy and payment procedures to ensure compliance under the PCI-DSS Standard.
- Identify areas of concerns related to PCI-DSS Compliance within Philips business and IT application structure.
- Identify policy concerns and payment procedures with risk-based approach policy assessment related to PCI-DSS Compliance of Philips business and IT application structure.
- Apply critical thinking and decision-making to coordinate improvements and recommendations regarding Philips cyber security of critical infrastructure regarding to payment systems processing.

Pace University

Pleasantville, NY

Undergraduate Student Researcher (2012 Verizon ThinkFinity Grant)/Research Assistant

October 2012 – May 2014

- Co-authored multiple research papers based on the findings for Pace University's Gerontechnology Program led under Dr. Jean F. Coppola, demonstrating good skill in oral and written communications.

IBM

Somers, NY

CIO Student Intern – IT Risk Architecture

June 2013 – August 2013

- Assisted with risk-based approach policy assessment guidelines and deployment of a password management system for IBM employees.
- Analyzed packet data collected IBM® Security QRadar® SIEM to determine threats and catastrophic attacks against IBM critical infrastructure.

Honors

National Science Foundation Scholarship for Service Award (2012 – 2014) • Undergraduate Library Research Award (2011) • Undergraduate Research Initiative Award (2012) • Dyson College of Arts and Sciences Society of Fellows Excellence in Social Science (2014) • Dyson College of Arts and Sciences Society of Fellows Participation and Service Award (2014) • Pace University Undergraduate Trustee Award (2014)

Publications and Presentations

Kowtko, M. (co-author). “Biometric Authentication for Older Adults,” 2014 Proceedings of IEEE Long Island Systems, Applications, and Technology Conference, Farmingdale, NY

- Discussed the potential challenges for authenticating older adults into multiple biometric systems.

Kowtko, M. (co-author). “Mobile App Development and Usability Research to Help Dementia and Alzheimer Patients,” 2013 Proceedings of IEEE Long Island Systems, Applications, and Technology Conference, Farmingdale, NY

- Developed mobile applications to assist and reduce the symptoms of Alzheimers and Dementia. Analyzing data collected from patients using these applications to determine if use improved their symptoms.

Kowtko, M. “Understanding the Issues of Personal Data in the European Union and the United States,” 2013 Michael L. Gargano 11th Annual Research Day, Presentation & Internal Conference Proceeding, White Plains, NY

- Presented the basics of Information Privacy and the privacy laws of the European Union (EU) and the United States.

“The Use of Virtual Machines by Cybercriminals and their Impact on the Criminal Justice System,” 2012 Annual Meeting of Dyson Society of Fellows, Poster Presentation, White Plains, NY

- Presented the basics of computer forensics, criminal investigation proceedings, and explained how encrypted virtual machines impact the criminal justice system.

“Information Security: Protecting Our Nation Against Cyber Attacks,” 2011 Annual Meeting of Dyson Society of Fellows, Poster Presentation and Research Paper, White Plains, NY

- Presented on the importance of cybersecurity to a general audience in the College of Arts and Science at Pace University. A simulated live DoS attack on a web server, and packet traces from Wireshark, were shown to explain the impact of cyber-attacks.

Kowtko, M. “Using Assistive Technologies to Improve Lives of Older Adults and People with Disabilities,” 2012 Proceedings of IEEE Long Island Systems, Applications, and Technology Conference, Farmingdale, NY

- Discussed the challenges between technology and people with disabilities. This research also focuses on laws that support and challenge assistive technologies and web accessibility.

Kowtko, M. “Securing Our Nation and Protecting Privacy,” 2011 Proceedings of IEEE Long Island Systems, Applications, and Technology Conference, Farmingdale, NY

- Covered well-known network attacks and security breaches within the government sector and the private sector.

Activities

Pace University Westchester Computer Society, President

September 2011- January 2014

- Reorganized and transformed through strong judgment and leadership skills of the Westchester Computer Society into an active professional student computing organization

Northeast Collegiate Cyber Defense Competition, Co-Captain

2011, 2012, 2013 (Qualifier)

- Brute-forced passwords to gain access; conducted Web server vulnerability assessment for E-commerce website; monitored web traffic and logged malicious content; assisted with administration of the Windows Server 2003; assisted with configuration of the Cisco router and competition network; assisted with the administration of Solaris Operating System; assisted with the administration of the Mail Server. Assist in developing local area networks, automated systems or servers, and a variety of hardware and software.

Applied Innovation Institute Mobile App Competition at Mobile World Congress, Member

2011 and 2012

- Co-developed and presented a business model for the Pace University Mobile App, “*The Gallery App*”; an application designed to comfort and improve the cognition of patients suffering from Alzheimer’s and Dementia. App was featured in the finalist round of the 2013 Applied Innovation Institute Mobile App Competition.

Course and Research Projects in Information Technology and Information Assurance

Biometric Authentication for Older Adults, Fall 2012 – Spring 2014

- Examining health/medical challenges of the geriatric population and how they interfere with biometric authentication
- Researching new biometric technologies needed to mitigate these authentication challenges

Improving the Cognition of Older Adults Using Mobile Technologies Fall 2012 – Spring 2013

- Developing iPad and Android mobile applications that can be utilized to improve the cognition or reduce the systems of patients diagnosed with Alzheimer’s Disease or other related form of Dementia
- Analyzing data collected from patients using these applications to determine if their use improves their symptoms

The Use of Virtual Machines by Cybercriminals and their Impact on the Criminal Justice System, Spring 2012

- Investigated forensic methods to analyze encrypted virtual machines used by criminals
- Used both Helix3 and Access Data Forensic Toolkit to determine the readability of encrypted operating systems

Secure Implementation and Configuration of a Fedora Operating System, Fall 2011 and Spring 2012

- Prepared for the Northeast Collegiate Cyber Defense Competition (March 9-11, 2012)

- Developed lab manual and built a virtual machine of Fedora 15 including SELinux, firewall, services configuration, authentication, and backup utilities

Digital Forensics Analysis, Computer Forensics Course, Fall 2011

- Used Helix3 Computer Forensic Live CD to examine partitions, file settings, and content of files from a digital forensics image
- Examined network packets using Wireshark to search for forensics evidence

Web Server Vulnerability Assessment, Network and Internet Security Course, Spring 2011

- Conducted reconnaissance methods, denial-of-service attacks, and penetration testing on both a web service and the virtual machine hosting the service to determine system specifications, ports utilized and configurations within the web server

Vulnerability Scanning and Discovery, Computer Security Overview Course, Fall 2010

- Utilized nMap, Nikto and Nessus web vulnerability scanners to discover security flaws within a web service and MySQL database connected to the web service. The web service was configured internally within a virtual environment

Memberships

InfraGuard • IEEE & ACM • High Technology Crime Investigation Association (HTCIA) • OWASP-NYC Chapter • Pforzheimer Honors College • Pace University Dyson Society of Fellows • Alpha Chi New York Mu Chapter 220 • Upsilon Pi Epsilon • Golden Key • Lambda Sigma

Volunteer

FIRST Tech Challenge

Referee/University Student Volunteer

Pleasantville, NY

September 2010 – February 2014

- Refereed robotic matches for Hudson Valley Regional Competition(s) and provided oral communication to team participants.

Army Community Service

Former US Army Base Fort Monmouth, NJ

Office Assistant/Technical Support

Summer 2004 – 2008

- Followed standard office policy and procedures, ensured the filing of accurate records and performed multiple and varying assignments under the limited direction of a manager.