David Adrian

Contact Information	**Online Information**
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Education

University of Michigan, Ann Arbor, MI

PhD, Computer Science   Expected 2019
- ADVISOR: J. Alex Halderman
- RESEARCH FOCUS: Computer Security

Masters of Science in Engineering, Computer Science   Expected 2016
- GPA: 4.00/4.00

Bachelors of Science in Engineering, Computer Science   Class of 2014
- GPA: 3.52/4.00
- ACADEMIC MINOR: Mathematics

Research Experience

Research Assistant, *with Professor J. Alex Halderman*   2013 - Present
- Computer security and Internet measurement research, concentrating on taking a global view of network ecosystems to gain security insights
- Created and maintain ZGrab and ZMap, open-source tools for high-speed Internet-wide measurement (available on GitHub)
- Developed a custom and automated big-data processing toolchain capable of handling >1TB data/day on current small-scale deployment, used for analyzing and searching Internet-wide measurement results

Whisper Project, *with Professor Robert P. Dick*   2011 - 2013
- Released MANES, an Android prototyping framework for mobile ad-hoc networks
- Released Shout, a user-facing censorship-resistant communication application built using MANES (available on Google Play Store)

Work Experience

Software Engineering Intern, *Duo Security*   Summer 2013
- Two-factor authentication-as-a-service, using mobile phones as the second authentication factor and push notifications for login approval.
- Grew various Python backend subsystems to support new features; handled all bugs, feature requests, and security considerations for the Duo Unix client.
- Wrote a patch for OpenSSH to securely allow third-party authentication plugins.

Teaching Experience

Instructional Aide, *EECS 280: Programming and Data Structures*		Fall 2013
Instructional Aide, *EECS 281: Data Structures and Algorithms*		Winter 2014
Graduate Student Instructor, *EECS 588: Computer Security*		Winter 2015

Leadership and Honors

Eta Kappa Nu (HKN), *Beta Epsilon Chapter*   2013 - Present
- Taught local high school and middle school students programming in Java and Android application development.

Computer Skills

Languages: C, Python, Go, C++, Java, Javascript, PHP, LaTeX, HTML/CSS, Haskell

Platforms/Frameworks: Android, Unix API, Node.js, Tornado/Cyclone/Twisted, Celery, React, Parse, Unity3D, OpenGL, MATLAB

Databases: MySQL, RocksDB, MongoDB, Voldemort, Redis, neo4j

Publications　　　**Zippier ZMap: Internet-Wide Scanning at 10 Gbps**
　　　　　　　　　　David Adrian, Zakir Durumeric, Gulshan Singh and J. Alex Halderman
　　　　　　　　　　8th USENIX Workshop on Offensive Technologies (WOOT '14)

　　　　　　　　　　The Matter of Heartbleed
　　　　　　　　　　Zakir Durumeric, Frank Li, James Kasten, Johanna Amann, Jethro Beekman,
　　　　　　　　　　　　Mathias Payer, Nicolas Weaver, David Adrian, Vern Paxson, Michael Bailey,
　　　　　　　　　　　　and J. Alex Halderman
　　　　　　　　　　Proc. 14th ACM Internet Measurement Conference (IMC '14)
　　　　　　　　　　Best Paper Award!

　　　　　　　　　　Performance and Energy Consumption Analysis of a Delay-Tolerant Network for Censorship-Resistant Communication
　　　　　　　　　　Yue Liu, David R. Bild, David Adrian, Gulshan Singh, Robert P. Dick,
　　　　　　　　　　　　Dan S. Wallach, and Z. Morley Mao
　　　　　　　　　　Proc. ACM Internation Symposium on Mobile Ad Hoc Networking and Computing 2015 (MobiHoc 2015)