

Anastasia Shuba

PERSONAL INFORMATION

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RESEARCH INTERESTS

Mobile and IoT: Security and Privacy, Data Analytics, Machine Learning, Privacy Policies

EDUCATION

University of California, Irvine

Ph.D in Computer Engineering

Sept. 2014 – Jun. 2019

- Thesis: “Mobile Data Transparency and Control”
- Advisor: Athina Markopoulou
- GPA: 3.7

M.S. in Computer Engineering

Sept. 2014 – Jun. 2016

- Thesis: “AntMonitor: A System for Mobile Network Monitoring”
- Advisor: Athina Markopoulou
- GPA: 3.7

B.S. in Computer Engineering

Sept. 2010 – Jun. 2014

- Thesis: “Home Automation with Android”
- Advisor: Kwei-Jay Lin
- GPA: 3.8
- Graduated with Cum Laude

WORK EXPERIENCE

Broadcom Software

R&D Engineer

Aug. 2019 – present

Designing and building features for a cross-platform (Windows, OS X, and Linux) network intrusion detection engine that is part of Symantec Endpoint Protection.

Symantec Corporation

Software Engineering Intern

Jun. 2018 – Sept. 2018

Worked on network security solutions for Android and iOS.

Metronome Software

Graduate Software Engineering Intern

Jun. 2016 – Sept. 2016

Graduate Software Engineering Intern

Jun. 2015 – Aug. 2015

Software Engineering Intern

Oct. 2012 – Sept. 2014

Designed and implemented a system aimed toward automatic forensic analysis using Volatility, The Sleuth Kit, LibVMI, and various virtualization platforms. Designed and implemented Android applications using Java and SQLite. Implemented web servers using Java, Hibernate, PostgreSQL, and Python.

	Praxis BioSciences <i>Software Engineering Intern</i> Jun. 2012 – Sept. 2012 Developed medical systems that involved Android devices and microcontrollers.
RESEARCH EXPERIENCE	Unaffiliated <i>Independent Researcher</i> Jun. 2020 – present Collaborating with researchers at the University of California, Irvine and the University of Oxford to analyze the privacy aspects of mobile and IoT systems.
	University of California, Irvine <i>Graduate Research Assistant</i> Sept. 2014 – Jun. 2019 Advisor: Athina Markopoulou Designed and implemented Android applications aimed at helping users preserve their privacy. Developing machine learning models to predict presence of personal information, trackers, and advertisement in mobile network traffic.
	<i>Undergraduate Research Assistant</i> Sept. 2013 – Jun. 2014 Advisor: Kwei-Jay Lin Designed and implemented an Android app used to control a home automation system.
	<i>Undergraduate Research Assistant</i> Apr. 2012 – Jun. 2012 Advisor: Rainer Doemer Enhanced system level design in C++ for a SpecC reference compiler and simulator.
HONORS AND AWARDS	PETS 2018: The Andreas Pfitzmann Best Student Paper Award ARCS Foundation Scholar Award 2016-2018 University of California, Irvine EECS Fellowship 2014-2016 MobiHoc 2018: Student Travel Grant Award SIGCOMM 2017: N2 Women Student Travel Grant Award SIGCOMM 2017: Student Travel Grant Award PETS 2017: Student Travel Grant Award MobiCom 2015: Student Travel Grant Award University of California, Campuswide Honors Program 2011-2014 Edison Scholarship 2010-2014
PUBLICATIONS	Peer-Reviewed Publications <ol style="list-style-type: none"> 1. K. Kollnig, A. Shuba, R. Binns, M. V. Kleek, N. Shadbolt, “Are iPhones Really Better for Privacy? Comparative Study of iOS and Android Apps,” <i>Under Submission</i> 2. R. Trimananda, H. Le, H. Cui, J. Ho, A. Shuba, A. Markopoulou, “OVRSeen: Auditing Network Traffic and Privacy Policies in Oculus VR,” <i>to appear in Proceedings of the 31st USENIX Conference on Security Symposium (SEC), 2022</i> 3. A. Shuba, A. Markopoulou, “NoMoATS: Towards Automatic Detection of Mobile Tracking,” <i>Proceedings of the Privacy Enhancing Technologies Symposium (PoPETs)</i>,

2020

4. J. Varmarken, H. Le, A. Shuba, A. Markopoulou, Z. Shafiq, “The TV is Smart and Full of Trackers: Measuring Smart TV Advertising and Tracking,” *Proceedings of the Privacy Enhancing Technologies Symposium (PoPETs)*, 2020
5. A. Shuba, Z. Shafiq, A. Markopoulou, “NoMoAds: Effective and Efficient Cross-App Mobile Ad-Blocking,” *Proceedings of the Privacy Enhancing Technologies Symposium (PoPETs)*, 2018, **The Andreas Pfitzmann Best Student Paper Award**
6. A. Shuba, E. Bakopoulou, A. Markopoulou, “Privacy Leak Classification on Mobile Devices,” *IEEE International Workshop on Signal Processing Advances in Wireless Communications (SPAWC)*, 2018
7. A. Shuba, A. Le, M. Gjoka, J. Varmarken, S. Langhoff, A. Markopoulou, “AntMonitor: Network Traffic Monitoring and Real-Time Prevention of Privacy Leaks in Mobile Devices,” *Proceedings of ACM S3 Workshop on Mobile Computing and Networking*, 2015
8. A. Le, J. Varmarken, S. Langhoff, A. Shuba, M. Gjoka, A. Markopoulou, “AntMonitor: A System for Monitoring from Mobile Devices,” *Proceedings of ACM SIGCOMM Workshop on Crowdsourcing and Crowdfunding of Big Internet Data*, 2015

Demos

5. A. Shuba, A. Markopoulou, “Demo: AntWall - A System for Mobile Adblocking and Privacy Exposure Prevention,” *Proceedings of the 18th ACM International Symposium on Mobile Ad Hoc Networking and Computing*, 2018
6. A. Shuba, A. Le, M. Gjoka, J. Varmarken, S. Langhoff, A. Markopoulou, “Demo: AntMonitor - A System for Mobile Traffic Monitoring and Real-Time Prevention of Privacy Leaks,” *Proceedings of 21st International Conference on Mobile Computing and Networking*, 2015
7. A. Shuba, A. Le, M. Gjoka, J. Varmarken, S. Langhoff, A. Markopoulou, “Demo: AntMonitor - Network Traffic Monitoring and Real-Time Prevention of Privacy Leaks in Mobile Devices,” *Proceedings of ACM S3 Workshop on Mobile Computing and Networking*, 2015, **Best Demo Award**

TEACHING
EXPERIENCE

University of California, Irvine

Teaching Assistant

Fall 2016, Fall 2017, Spring 2019

EECS 148/CS 132 - Computer Networks

Ikazuchi Dojo

Visiting Instructor

Jun. 2019 – present

Technical Director

Dec. 2017 – Jun. 2019

Instructor

Dec. 2014 – Dec. 2017

Assistant Instructor

Sept. 2014 – Dec. 2014

Leading weekly Aikido classes for groups of various ages and backgrounds. Mentoring students who are preparing for belt testing. Providing private training sessions for individuals wishing to accelerate their development.

Blizzard Entertainment

Visiting Martial Arts Instructor

May 2015 – present

Leading Aikido training courses for groups of gaming industry professionals.

Anteater Recreation Center

Martial Arts Instructor

Sept. 2014 – Jun. 2016

Designing and leading 10-week Aikido courses for groups of 10-35 university students.

Newport Harbor High School

Tutor

Sept. 2010 – March 2012

Tutored groups of 20-40 students of different backgrounds in advanced math and physics.

Discovery Science Center

Presenter

July 2011 – Sept. 2011

Explained scientific concepts to children in a fun and engaging way.

COMPUTING
SKILLS

Programming Languages: Java, Python, JavaScript, Swift, C/C++

Mobile Development: Android and iOS

Miscellaneous: socket programming and network protocols (TCP/IP, DNS, HTTP)

PROFESSIONAL
ACTIVITIES

Technical Program Committee Member: PETS 2022

Student Volunteer: ACM CoNEXT 2016, PETS 2017, N2 Women Workshop 2017, SIGMETRICS 2018

REFERENCES

Available upon request