

Skanda Koppula

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Massachusetts Institute of Technology

Masters of Engineering, Computer Systems and Security, GPA: 5.0/5.0

Sept. 2016 - Present

Massachusetts Institute of Technology

Major: Computer Science and Engineering, BSc, GPA: 4.7/5.0

Sept. 2013 - June 2016

Relevant courses: Computer and Network Security, Compilers, Digital Communications Systems, Computer Systems Engineering, Cryptography, Design and Analysis of Algorithms, Theory of Computation, Artificial Intelligence, Computer Architecture, Operating Systems, Computer Networks

Projects and Work Experience

Yahoo Login Abuse Team, Software Engineering Intern

June 2016 - Sep. 2016

- Developed low-latency classifier to label registration events on Yahoo services as spam and botnets. Demonstrated a 1.27x improvement in classifier accuracy from the previous systems
- Built data feed service to automatically grab data from Facebook ThreatExchange and four other sources for real-time classifier updates

Square Security Infrastructure Team, Software Engineering Intern

June 2015 - Aug. 2015

- Added embedded firmware to capture memory dump when the Square card-reader crashes
- Developed back-end service to symbolify binary contents to human-readable source error trace

Low Latency Privacy-Preserving Biometric Authentication

May 2015 - Present

MIT Energy Efficient Circuits Group

- Designed protocols for privacy-preserving speaker authentication in the Pailler/BGN cryptosystems
- Constructed a software prototype of speaker authentication systems

Embedded Software for MIT Electric Vehicle Team

May 2014 - Present

- Designed module (with 32-bit ARM core and high-power relays) to read in status of car toggles and output control CAN messages to drive car
- Developed software tools to eavesdrop on the CAN bus and verify that message bus contains messages that match our signaling specification

Power-Based Side-Channel Attack for AES Key Extraction on ATMega328P

Sept. 2015 - Nov. 2015
6.858 Final Project - Computer Systems Security

- Built hardware setup to measure power consumption, and implemented the Correlation Power Analysis algorithm that extracts an AES secret from an Arduino's flash memory measuring only power consumption

Skills

Web Systems: **JAX-RS/Jetty, Rails/RSpec, Flask, JavaScript, Node.js**

Embedded Systems: **C**, and working knowledge in **x86 Assembly** and **Bluespec Verilog**.

Misc: **Python, Scala, shell, Haskell, Hadoop FS/Hive, scipy, TensorFlow**

Awards

Analog Devices Research and Innovation Scholar Award	2015
Third Place in Jane Street Collegiate Programmatic Trading Competition	2015
Crowd Favorite Research Poster at the 2016 MIT EECS Research Conference (EECSCon)	2016
Google Science Fair Finalist	2011