

Saksham Chitkara

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EDUCATION

CARNEGIE MELLON UNIVERSITY

Masters of Science, Information Security
August 2017 - May 2019 | Pittsburgh, PA
Information Networking Institute

COURSEWORK FOR 2016-2017

Audited as a Research Associate

08-840 Green Computing

08-735 User-Focused Sensing Systems

COURSEWORK FOR FALL 2017

15-513 Introduction to Computer Systems

08-736 Ubiquitous Computing

18-730 Introduction to Computer Security

10-601 Introduction to Machine Learning

SRM UNIVERSITY

Bachelors of Tech., Computer Science
September 2017 - June 2018 | Chennai, India
GPA: 4.0 / 4.0

SKILLS

Programming and Scripting Languages

Java • Python • C

C++ • Matlab • Go • Assembly • HTML/CSS

Tools and Frameworks

Android • Django Framework

Git • Vim • Shell Scripts • \LaTeX

CONFERENCES

- **Ubicomp 2017** - First Author Publication
- Topic: Why Does this App Need My Location?
- **Conference Acceptance Rate < 20%**
- **Featured Paper (5 in 100+ Published Papers)**
- **CMU CyLab Conference 2017**
- Poster Presentation - ProtectMyPrivacy
- **DARPA Brandeis 2017**
- CyberSecurity Project Presentation
- Topic: Privacy-Enhanced Android
- **CMU Privacy Day 2017**
- Poster Presentation - PrivacyProxy

AWARDS

- Prabhu and Poonam Pandey Fellowship,
(1 of 34 students in MSIS 2017)
@ Information Networking Institute,
Carnegie Mellon University
- India's Best Brains, Rank 3/3700

EXPERIENCE

CARNEGIE MELLON UNIVERSITY | Research Associate

Jan 2016 – June 2017 | Pittsburgh, PA

- Lead a 5 person CMU team to manage 3 DARPA funded projects on improving the privacy and security of Android. Worked in collaboration with teams from UC Berkeley, Cornell and UC Irvine.
- Constructed an all-encompassing purpose taxonomy for private data accesses on smartphones and enforced data transmission to apps on the basis of purpose of data accesses.

DELL INC | Software Engineering Intern

Summer 2014 | Chennai, India

- Wrote scripts to perform security automation and testing.

RESEARCH

WHY DOES THIS APP NEED MY LOCATION?

First Author Publication at Ubicomp 2017 | Featured Paper (Top 5%)
Systems + Mobile Security | Jan 2016 - Aug 2017

- Designed and built a Context-Aware library based permission model for Android which lead to 25% better protection and 30% reduced user decisions while telling the users the purpose of PII access.
- <https://dl.acm.org/citation.cfm?doid=3139486.3132029>

PRIVACY PROXY | CHIMPS Lab + Synergy Lab, CMU

Aug 2016 – Aug 2017 | Systems + Network Security

- Leveraging Crowdsourcing and In Situ Traffic Analysis to Detect and Mitigate Information Leakage.
- <https://arxiv.org/pdf/1708.06384.pdf>

PROJECTS

HAND GESTURE RECOGNITION

Aug 2017 - present | Wearable Systems

- Modify the wearable devices to transmit the accelerometer data at an increased rate.
- Capture the bio acoustic feedback from accelerometer data to do activity recognition.

OPTICAL HEART RATE MONITOR

Sept 2017 - Oct 2017 | Mobile Systems

- Monitor the heart rate by using photoplethysmography (PPG) - detecting change in blood volume during a cardiac cycle - by illuminating a user's finger via the smartphone camera.
- The system's accuracy was within 5% of the actual heart rate.

PROTECT MY PRIVACY | Synergy Lab, CMU

Jan 2016 – Aug 2017 | Systems + Security | 30,000+ downloads

- Built an end-to-end app, which collects, enforces and transmits the user's privacy decisions.
- Designed and implemented a Firewall which blocks Wifi and mobile data on a per app basis by interacting with the Android Kernel.