Me

- Rocky Slavin, PhD
- Assistant Professor
- UTSA Alumnus
- Research: software engineering, privacy, and cybersecurity
- Industry: web and mobile applications
Software Engineering

- Software is made *for* people *by* people
- Bridge the gap!

Developer

Requirements

End User
Software Security

Software should work as expected

Confidentiality

Integrity

Availability

SECURITY
Software Security Problems

- Passwords and Authentication
- Data Storage
- Scalability
- Robustness
- Maintenance
- User Experience
- *and so many more...*
Astonishing UI

Emergency alert system

MISSLE ALERT
ALERT TEST
Astonishing UI

Emergency alert system

MISSILE ALERT
ALERT TEST
Privacy and Convenience

[Image of surveillance cameras and various social media and technology logos]

Dropbox
Bank of America
Running app
WF
Gmail by Google
Snapchat
Privacy in Mobile Applications

- GPS
- Cameras
- Bluetooth
- NFC
- Proximity
- WiFi
- Accelerometer
- Heart Rate
As part of the standard operation [...] Indeed will automatically collect information from your computer or mobile device, including, but not limited to, your browser type, operating system, IP address and the domain name from which you accessed the site, and if you are accessing our site with your mobile device, type of mobile device. In addition we may record actions taken on the Website including, but not limited to, date and times of use, clicks, page views, the amount of time you spend on each page, and search queries. Indeed reserves the right to match your IP address or other information with other information about you in any way permitted by applicable law. Indeed will store this information on its equipment or the equipment of third parties that it has a relationship with for that purpose. If you create an Indeed account, information may be collected under your account email address.
Policy and Code
Problem: Humans don’t speak too good

- “We collect your location information.” (collected)
- “We do not collect your location information.” (not collected)
- “We collect information including, but not limited to, location information.” (collected)
- “We collect location information when the app is not in the foreground.” (collected)
- “We do not collect your location information when you are not using the app unless it is not specified by the terms of use.” (???)
Problem: What is the app doing?
Developer Tools
End User Tools

PVDetector

Use the form below to upload your Android application along with the text of the corresponding privacy policy to check for consistency. Once the analysis is complete, you will receive an email with the results.

Not sure how to use this form? Use the tutorials to the right to learn how you, as either a developer or a policy checker, can get the necessary files to check an app for consistency.

Email Address:

APK File: Choose File  No file chosen

Privacy Policy:

Submit

Tools
- PVDetector
- Source Code Analyzer
- Android Studio Plugin

Tutorials
- Developer Instructions
- Auditor Instructions

Related
- UTSA Software Engineering Publications
Software Engineering and Security

Create quality, predictable software
Help the people involved in the software lifecycle
Best Practices
Research