

# Praveen Kumar Pendyala

Android developer | Linux enthusiast | Web hobbyist

## Info

<http://pkp.io>  
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## Contact

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## Skills

### Programming

Java, Python, PHP,  
JavaScript, Kernel C,  
Octave, Verilog

### Android

MVP architecture,  
Material Design,  
Retrofit, Picasso, Play  
Services, Dagger

### Web

AngularJS, HTML5,  
REST APIs, Bootstrap,  
MVCs, Jekyll, Angular  
Material, Moodle

### Tools

Git, SVN, MySQL,  
Asterisk, L<sup>A</sup>T<sub>E</sub>X

### Platforms

Linux, Windows, Mac  
OSX, Beaglebone,  
Google App Engine

## Note

Only included the most recent and major accomplishments in each section. For complete list, please refer to the web links in info section.

## Education

- 2014–2016 **Masters**, Distributed Software Systems Technische Universität Darmstadt  
*GPA of 3.5 out of 4.0 in US grading – converted from 1.50 in German grading.*
- 2010–2014 **Bachelors**, Electrical Engineering Indian Institute of Technology Bombay

## Experience

- 2014–2016 **Systems Security Lab, TU Darmstadt** Android Developer and Security Researcher  
*Successfully completed 3 different projects in Cloud security, Anonymous voice communications, and Analysis of attacks on Android. Co-authored 2 papers published in top tier conferences (one more in submission).*
- 05–08 2014 **Google Summer of Code** Android Developer and Linux Kernel Programmer  
*Developed kernel display drivers for accessing the GUI of a Linux device on Android by connecting with a USB cable. Also implemented an open source kernel driver to setup any Android device into Android Accessory mode.*

## Publications

- **Phonion: Practical Protection of Metadata in Telephony Networks** in *Proceedings on Privacy Enhancing Technologies (PoPETs) 2017*
- **DroidAuditor: Forensic Analysis of Application-Layer Privilege Escalation Attacks on Android** in *Financial Cryptography and Data Security Conference 2016*

## Achievements

- Winners of MAPPING (Managing Alternatives for Privacy, Property and Internet Governance) App Competition and €20,000 prize money at CeBIT 2016, Hannover
- A. Richard Newton Young Student Fellow Award, DAC 2014, San Francisco

## Projects

- 2015–2016 **Omnishare** Android, Cryptography, Dropbox and Google Drive APIs  
*Omnishare is an Android application for client side encryption of data before uploading to cloud storage services. Collaborated with a team of 5 in designing the encryption architecture. Developed the Android application using modular components and Factory design pattern for abstracting different cloud APIs.*
- 2015–2016 **Phonion** Python, Java, Twilio, Asterisk, Google Voice, Selenium, Tor  
*Phonion is an anonymization network for voice communications. Designed and implemented the Phonion architecture which offers 50% lower latency and 30% better voice quality than alternatives like VoIP over Tor network. Implemented a distributed resource locking system for allocation of phone numbers from loosely co-operating entities.*
- 2012–2016 **MDroid - Moodle for Android** Android, Githooks, REST APIs, Markdown  
*Created a native open sourced Moodle application for Android. The app received over 80,000 downloads on Play Store and translated into 3 different languages by contributors.*