

Praveen Kumar Pendyala

Android developer | Testability advocate | Clean code enthusiast

Information

<http://pkp.io>
[github/praveendath92](https://github.com/praveendath92)

Contact

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Fulda, Germany

Skills

Programming

Java, Python, PHP,
JavaScript, Matlab,
Kernel C

Android

MVP design pattern,
Dagger 2, Material
Design, Retrofit

Testing

JUnit, Espresso,
Mockito, Robolectric,
Cucumber, Monkey
tool, Selenium

Web

AngularJS, NodeJS,
Npm, HTML5, REST
APIs, Bootstrap, Jekyll

Tools

Git, Travis CI, Maven,
Gradle, MySQL, \LaTeX

Platforms

Linux, Docker, Google
App Engine, Heroku

MOOCs

Machine Learning
(grade: 97.3%)

Algorithms: Design
and Analysis, Part 1
(grade: 95.6%)

Education

- 2015–2017 **Masters**, Distributed Software Systems Technische Universität Darmstadt
GPA of 3.9 out of 4.0 in US grading – converted from 1.55 in German grading.
- 2010–2014 **Bachelors**, Electrical Engineering Indian Institute of Technology Bombay

Experience

- 2014–2017 **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 over USB interface. Improved the frame rate from an initial 10fps to 25fps by employing partial updates for only modified areas of UI and by implementing Run-length Encoding for loss-less, inline compression of image updates.

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** Android, Python, Java, Twilio, Asterisk, Google Voice, Selenium
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 and maintained a native open sourced Moodle application for Android. The application received over 80,000 downloads on Google Play Store and translated into 3 different languages by contributors.