Praveen Kumar **Pendyala**

Java developer | Testability advocate | Clean code enthusiast

Information

http://pkp.io
github/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

2014–2016 **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** — Java, Python and Android Developer
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 **Phonion** — Java, Python, Twilio, Asterisk, 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 mechanism in Java and Python for allocation of phone numbers from loosely co-operating entities.

2015–2016 **Omnishare** — Java, Cryptography, Android, Dropbox and Google Drive APIs
Omnishare is an application that performs client side encryption of data before uploading to cloud storage services. Collaborated with a team of 5 in designing the encryption architecture. Developed the application using modular components and Factory design pattern in Java for abstracting different cloud APIs.

2012–2016 **MDroid - Moodle for Android** — Java, REST APIs, Android, Git hooks, 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.