Praveen Kumar Pendyala

Android developer | Clean code enthusiast | Web hobbyist

Info

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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, LaTeX

Platforms

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

MOOCs

Machine Learning – by Stanford University on Coursera,

Deep Learning* – by Google on Udacity

*In progress

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.