

# Ankit Kalbande

EMBEDDED ENGINEER · SECURITY EXPERT

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“Be the change that you want to see in the world.”

## Summary

Current Co-founder & Software Engineer in start-up company PLAT Corp. 5+ years experience specializing in backend/infrastructure, web development and computer security. Super nerd who loves Vim, Linux and OS X and enjoys to customize all of the development environment. Interested in devising a better problem-solving method for challenging tasks, and learning new technologies and tools if the need arises.

## Work Experience

### Europäische Funk-Rundsteuerung(EFR) GmbH

Munich, Germany

EMBEDDED DESIGN ENGINEER & SECURITY EXPERT

Jun. 2016 - PRESENT

- Designed BSI (Bundesamt für Sicherheit in der Informationstechnik) compliant software architecture for SMGW (Smart Meter Gateway).
- Developed a secured linux boot workflow for Atmel's SAM5D35 MCU (ARM cortex A5).
- Integrated smartcard with SMGW.
- Making the SMGW Common Criteria Compliant (ISO/IEC 15408).
- Tools (Openssl, Buildroot, Wireshark, Eclipse, etc)
- Protocol (TLS/SSL 1.2, ISO7816, NTP, SOCKSV5 )

### R.O.K Cyber Command, MND

Seoul, S.Korea

SOFTWARE ENGINEER & SECURITY RESEARCHER (COMPULSORY MILITARY SERVICE)

Aug. 2014 - Apr. 2016

- Lead engineer on agent-less backtracking system that can discover client device's fingerprint(including public and private IP) independently of the Proxy, VPN and NAT.
- Implemented a distributed web stress test tool with high anonymity.
- Implemented a military cooperation system which is web based real time messenger in Scala on Lift.

### NEXON

Seoul, S.Korea & LA, U.S.A

GAME DEVELOPER INTERN AT GLOBAL INTERNSHIP PROGRAM

Jan. 2013 - Feb. 2013

- Developed in Cocos2d-x an action puzzle game(Dragon Buster) targeting U.S. market.
- Implemented API server which is communicating with game client and In-App Store, along with two other team members who wrote the game logic and designed game graphics.
- Won the 2nd prize in final evaluation.

### ShitOne Corp. (Start-up company)

Seoul, S.Korea

SOFTWARE ENGINEER

Dec. 2011 - Feb. 2012

- Developed a proxy drive smartphone application which connects proxy driver and customer.
- Implemented overall Android application logic and wrote API server for community service, along with lead engineer who designed bidding protocol on raw socket and implemented API server for bidding.

### SAMSUNG Electronics

S.Korea

FREELANCE PENETRATION TESTER

Sep. 2013, Mar. 2011 - Oct. 2011

- Conducted penetration testing on SAMSUNG KNOX, which is solution for enterprise mobile security.
- Conducted penetration testing on SAMSUNG Smart TV.

## Honors & Awards

### INTERNATIONAL

- 2014 **Finalist**, DEFCON 22nd CTF Hacking Competition World Final
- 2013 **Finalist**, DEFCON 21st CTF Hacking Competition World Final
- 2011 **Finalist**, DEFCON 19th CTF Hacking Competition World Final
- 2012 **6th Place**, SECUINSIDE Hacking Competition World Final

Las Vegas, U.S.A

Las Vegas, U.S.A

Las Vegas, U.S.A

Seoul, S.Korea

### DOMESTIC

- 2015 **3rd Place**, WITHCON Hacking Competition Final
- 2013 **Silver Prize**, KISA HDCON Hacking Competition Final

Seoul, S.Korea

Seoul, S.Korea

## Presentation

## 6th CodeEngn (Reverse Engineering Conference)

Seoul, S.Korea

PRESENTER FOR <DEFCON 20TH : THE WAY TO GO TO LAS VEGAS>

Jul. 2012

- Introduced CTF(Capture the Flag) hacking competition and advanced techniques and strategy for CTF

## Writing

### A Guide for Developers in Start-up

Facebook Page

FOUNDER & WRITER

Jan. 2015 - PRESENT

- Drafted daily news for developers in Korea about IT technologies, issues about start-up.

### AhnLab

S.Korea

UNDERGRADUATE STUDENT REPORTER

Oct. 2012 - Jul. 2013

- Drafted reports about IT trends and Security issues on AhnLab Company magazine.

## Program Committees

2016 **Problem Writer**, 2016 CODEGATE Hacking Competition World Final

S.Korea

2013 **Organizer & Co-director**, 1st POSTECH Hackathon

S.Korea

## Education

### TUM(Technical University of Munich)

Munich, Germany

MASTERS OF SCIENCE IN COMMUNICATION ENGINEERING

Oct. 2013 - Oct. 2015

- |                                |                               |                                |
|--------------------------------|-------------------------------|--------------------------------|
| • Embedded System and Security | • Software Defined Networking | • VLSI Design                  |
| • Wireless Sensor Network      | • System on Chip Design       | • Electronic Design Automation |
| • Network Planning             | • HW-SW Co-design System      | • Broadband Communication      |

### VNIT(Visvesvaraya National Institute of Technology)

Nagpur, India

BACHELOR OF TECHNOLOGY IN ELECTRONICS AND COMMUNICATION ENGINEERING

Aug. 2009 - Sept. 2013

- |  |                                     |                              |
|--|-------------------------------------|------------------------------|
| • Digital and Analog Circuit Designing | • Analog and Digital Communications | • Network Planning           |
| • Embedded System                      | • Mobile Communication              | • Real-time operating system |

## Extracurricular Activity

### PoApper (Developers' Network of POSTECH)

Pohang, S.Korea

CORE MEMBER & PRESIDENT AT 2013

Jun. 2010 - PRESENT

- Reformed the society focusing on software engineering and building network on and off campus.
- Proposed various marketing and network activities to raise awareness.

### PLUS (Laboratory for UNIX Security in POSTECH)

Pohang, S.Korea

MEMBER

Sep. 2010 - Oct. 2011

- Gained expertise in hacking & security areas, especially about internal of operating system based on UNIX and several exploit techniques.
- Participated on several hacking competition and won a good award.
- Conducted periodic security checks on overall IT system as a member of POSTECH CERT.
- Conducted penetration testing commissioned by national agency and corporation.