

# Laura Joy Erb

SOFTWARE ENGINEER

Boston, MA

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## Education

### Boston University, College of Engineering

Boston, MA

BACHELOR OF SCIENCE IN COMPUTER ENGINEERING

Sep 2016 - May 2020

- **GPA: 3.99/4.00**
- **Honors:** Dean's List, National Merit Scholar, Trustee Scholar: Merit-based award for top 20 students of 16,000
- **Affiliations:** Tau Beta Pi, Theta Tau
- **Courses:** Algorithms and Data Structures (C++), Building Software (Python), Advanced Software Engineering (C++)

### Universidad Pontificia Comillas ICAI

Madrid, Spain

CULTURAL EXCHANGE PROGRAM

Jan 2018 - May 2018

## Skills

**Technologies** C/C++, Python, Javascript, HTML, PHP, Java, LaTeX · Native Templates, React Native, Angular, Bootstrap, Unix/Linux

**Courses** Operating Systems, Building Software, Software Design, Algorithms and Data Structures

**Languages** English (Native), Spanish (Fluent), German (Conversational)

**Spanish** 4

## Experience

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

Seoul, S.Korea

SOFTWARE ENGINEER & SECURITY RESEARCHER (COMPULSORY MILITARY SERVICE)

Aug. 2014 - Exp. Apr. 2016

- Implemented a military cooperation system which is web based real time messenger in Scala on Lift.
- Improved functionality on military command and control system for incident response with Java Servlet.
- 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.

### 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, designed game graphics.
- Won the 2nd prize in final evaluation.

### Undergraduate Research, Computer Vision Lab(Prof. Bohyung Han)

Pohang, S.Korea

RESEARCHER FOR <DETECTING VIDEO'S TORRENTS USING IMAGE SIMILARITY ALGORITHMS>

Sep. 2012 - Feb. 2013

- Researched means of retrieving a corresponding video based on image contents using image similarity algorithm.
- Implemented prototype that users can obtain torrent magnet links of corresponding video relevant to an image on web site.

### Software Maestro (funded by Korea Ministry of Knowledge and Economy)

Seoul, S.Korea

SOFTWARE ENGINEER TRAINEE

Jul. 2012 - Jun. 2013

- Performed research memory management strategies of OS and implemented in Python an interactive simulator for Linux kernel memory management.

### 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.

## Extracurricular Activity

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### B10S (B1t On the Security, Underground hacker team)

[S.Korea](#)

CORE MEMBER

Nov. 2011 - PRESENT

- Gained expertise in penetration testing areas, especially targeted on web application and software.
- Participated on a lot of hacking competition and won a good award.
- Held several hacking competitions non-profit, just for fun.

### WiseGuys (Hacking & Security research group)

[S.Korea](#)

MEMBER

Jun. 2012 - PRESENT

- Gained expertise in hardware hacking areas from penetration testing on several devices including wireless router, smartphone, CCTV and set-top box.
- Trained wannabe hacker about hacking technique from basic to advanced and ethics for white hackers by hosting annual Hacking Camp.

### 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.

### MSSA (Management Strategy Club of POSTECH)

[Pohang, S.Korea](#)

MEMBER

Sep. 2013 - PRESENT

- Gained knowledge about several business field like Management, Strategy, Financial and marketing from group study.
- Gained expertise in business strategy areas and insight for various industry from weekly industry analysis session.

## Honors & Awards

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### 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](#)

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### DOMESTIC

- 2015 **3rd Place**, WITHCON Hacking Competition Final
- 2013 **Silver Prize**, KISA HDCON Hacking Competition Final
- 2013 **2nd Award**, HUST Hacking Festival
- 2010 **3rd Award**, HUST Hacking Festival
- 2012 **3rd Award**, Holyshield 3rd Hacking Festival
- 2011 **2nd Award**, Holyshield 3rd Hacking Festival
- 2011 **5th Place**, PADOCON Hacking Competition Final

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## Presentation

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### 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

### 6th Hacking Camp - S.Korea

[S.Korea](#)

PRESENTER FOR <METASPLOIT 101>

Sep. 2012

- Introduced basic procedure for penetration testing and how to use Metasploit

## Writing

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## A Guide for Developers in Start-up

FOUNDER & WRITER

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

[Facebook Page](#)

Jan. 2015 - PRESENT

## AhnLab

UNDERGRADUATE STUDENT REPORTER

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

[S.Korea](#)

Oct. 2012 - Jul. 2013

## Program Committees

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

[S.Korea](#)

2012 **Staff**, 7th Hacking Camp

[S.Korea](#)

2012 **Problem Writer**, 1st Hoseo University Teenager Hacking Competition

[S.Korea](#)

2012 **Staff & Problem Writer**, JFF(Just for Fun) Hacking Competition

[S.Korea](#)