


# Zak Blacher

Senior Software Engineer, Security Features

I'm a software engineer with a formal background in applied cryptography & digital privacy technologies. I'm passionate about bridging the gap between security & usability, and want to make it a seamless experience for developer and end-user alike.

resume@chalkzebra.com 

206-###-#### 

San Francisco 

www.linkedin.com/in/zakblacher 

www.github.com/zblach 

## Work Experience

### Sr. Software Engineer, Security Features

Fitbit

10/2016 - Present

San Francisco, CA

agile cryptosystems, website security fixes, monolithic java, OAuth2/JWT

### Trust Engineer, Security Infrastructure

LinkedIn

01/2015 - 10/2016

Mountain View, CA

PKI & CA engineering, user tools development, vendor security assessment

### Software Engineer, Payments Integration

Amazon.com

08/2013 - 10/2014

Seattle, WA

enterprise java, partner integration, key management, systems engineering

### Software Developer Intern, Platform Team

Sandvine

05/2012 - 09/2012

Waterloo, ON

protocols research, forensic attack reconstruction, FreeBSD kernel hacker

### TA (CS 116 & CS 245)

University of Waterloo

09/2011 - 05/2012

Waterloo, ON

graded assignments, proctored exams, held tutorial hours

### TA & Lead Computer Science General Tutor

University of Windsor

01/2008 - 08/2011

Windsor, ON

open office hours for any CS-related question, tutored tutors to tute

## Open Source Project Contributions

argon2-jvm – API compatibility fixes & testing

openssl – certificate validation false-success bugfix & test

sudo – removal of dependency on flawed crypto library

## Education

### Masters of Mathematics (Computer Science)

University of Waterloo

09/2011 - 08/2013

Waterloo, Ontario

Focus

- Differential Privacy
- Machine Learning

### Magister Nätverkssäkerhet (Security)

Karlstads Univesitet

08/2009 - 09/2010

Karlstad, Sweden

Focus

- Filesystem Forensics
- Cryptography & Privacy

### Bachelor of Science (Networks & Security)

University of Windsor

09/2006 - 08/2011

Windsor, Ontario

## Skills & Competencies

security engineering

developer education

privacy technologies

cryptography

linux systems

machine learning

metasploit/nmap

oauth2/saml/jwt

vagrant/docker

wireshark/tcpdump

## Engagements & Publications

"Transcending Cloud Limitations by Obtaining Inner Piece"

DEFCON 21 Speaker: Novel rate-limit bypass attacks against cloud storage APIs

"Filesystems & Volume Encryption"

CSC Talks: Guest Speaker @ UWaterloo

"Cluster-Slack Retention Characteristics: A Study of NTFS"

Masters Thesis: Filesystem forensics research for FIVES working group

"An Ontological Approach to SIP DoS Attack Detection"

Junior Masters Thesis: Classifying DoS attacks by traffic differentials

## Certificates & Awards

University of Waterloo Honorarium Scholarship (2011-2013)

University of Windsor Volunteer Service Award (2009-2011)

Community Outreach & Campus Involvement

UWindsor Outstanding Scholars Scholarship (2006-2008)

Sun Microsystems Certificate of Distinction (2004-2006)

ACM Programming Competition (2007)

Captain of UWindsor Primary Team - 3rd place in Michigan regional competition

## Volunteering

UWaterloo CS Grad Students Association

Treasurer (2012-2013)

UWindsor: Student Operate Computing Resources

President (2011), VP Finance (2007-2009)

University of Windsor: Computer Science Council

Undergraduate Student Representative (2007-2011)

UWindsor Programming Competition

High School Coach (2006-2011)

UWaterloo SHADOW Program

Foreign Exchange Student Support & Acclimation

## Languages

English  
Native or Bilingual

Python  
Expert

Java  
Expert

C  
Upper-intermediate

## Interests

cooking | jazz music | vim | travel | reading | crypto |  
privacy enhancing technologies | blackhat & defcon | blockchain