



# Filip Hrenić

SOFTWARE DEVELOPER · SITE RELIABILITY ENGINEER

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## Experience

### Facebook

London, United Kingdom

PRODUCTION ENGINEER - VULNERABILITY MANAGEMENT

Nov 2018 - NOW

- building distributed systems architecture to discover and manage vulnerabilities in all of Facebook infrastructure
- helping build "Vulnerability Management-as-a-Service" - self serviced vulnerability discovery, monitoring and alerting
- working with external partners (companies) on integrating multiple vulnerability providers into our system to broaden coverage and increase discovery speed
- cross functional work with numerous other teams to help them surface vulnerabilities in their libraries/repositories/services/hosts and helping them remediate
- one of the core maintainers of Facebook's opensource tools and libraries for managing vulnerability data (nvdtools)
- interviewer at Facebook; presenting at internal "conferences"
- helping new team members with onboarding - finding tasks and projects, explaining how the system works, etc.

### Twitter

San Francisco, California

HADOOP INFRASTRUCTURE INTERN

Jun 2018 - Aug 2018

- Hadoop SRE team, supporting all teams using the data infrastructure
- Worked on detecting bad hadoop data nodes and automating remediations
- Developed a more efficient way to extract metrics from log files
- Set up monitoring and alerting for newly exposed metrics
- Implemented a highly configurable and easy to use health check framework in Python. Runs periodically to check the condition of a node. Deployed to thousands of data nodes
- Technologies: Python, Puppet, git, Bash tools & scripting

### Facebook

London, United Kingdom

PRODUCTION ENGINEER INTERN

Sep 2017 - Nov 2017

- Windows Developer Infrastructure team, supporting Oculus team
- Worked on a system which would enable taking snapshots of virtual machines used for ephemeral tasks, like running tests. In that way we could speed up the process of cleaning the VM and returning it to a healthy state, instead of provisioning it all over again
- Technologies: Python, BTRFS, QEMU, Hack, internal tools

### Sofascore

Zagreb, Croatia

RESEARCH AND DEVELOPMENT ENGINEER

Dec 2015 - Sep 2017

- Developed a machine learning model for classifying users which enabled admins and moderators to monitor chat rooms with many "bad" users (swearing, posting fake scores, ...)
- Developed a system which would detect others scraping the website
- Created and developed the initial infrastructure for aggregation and querying of football player statistics
- Technologies: PHP, Python, PostgreSQL, Docker, Vagrant, git

### University of Zagreb, Faculty of Electrical Engineering

Zagreb, Croatia

GRADUATE TEACHING ASSISTANT

Oct 2016 - Mar 2018

- Helping other students to learn and overcome difficulties in following classes:
- 2016/2017 - Digital Logic, Software Design, Internet Security, Artificial Intelligence, Network Programming, Basics of Java Programming Language, Introduction to Knowledge Management, Distributed Big Data Processing
- 2017/2018 - Operating Systems

### University of Zagreb, Faculty of Electrical Engineering

Zagreb, Croatia

UNDERGRADUATE TEACHING ASSISTANT

Oct 2013 - Jul 2016

- Helping other students to learn and overcome difficulties in following classes:
- 2013/2014 - Mathematics 1, Digital Logic
- 2014/2015 - Mathematics 1&2, Digital Logic, Programming and Software Engineering, Algorithms and Data Structures, Electronics 1
- 2015/2016 - Mathematics 3, Probability and Statistics

### Genome Institute of Singapore

Singapore

RESEARCH OFFICER

Jul 2015 - Sep 2015

- Used a customized mathematical models for simulating intraspecies interactions in the human microbiome
- Presented scientific papers on that subject to the entire team
- Technologies: MatLab, Python

# Education

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## Faculty of Electrical Engineering and Computing, University of Zagreb

MASTER'S DEGREE, TELECOMMUNICATIONS AND INFORMATIONS

Zagreb

Oct. 2016 - Sep. 2018

- Thesis: Design of the IPv4 Routing System Based On Field-Programmable Gate Arrays
- GPA: 4.70/5

## Faculty of Electrical Engineering and Computing, University of Zagreb

BACHELOR'S DEGREE, COMPUTER SCIENCE

Zagreb

Oct. 2013 - Jul. 2016

- Thesis: Detection of Inappropriate Messages in Online Chats
- GPA: 4.86/5
- Additional courses: Discrete and Continuous mathematics, Programming in Haskell, Introduction to Java Programming Language, Object Oriented Programming, Basic use of Linux Operating System, Advanced use of Linux Operating System

## Coursera

STUDENT

Online

2014 - 2016

- Algorithmic Thinking 1&2 (Rice University)
- Algorithms 1&2 (Princeton University)
- Algorithms: Design and Analysis 1 (Stanford University)
- Cryptography 1 (Stanford University)
- Game Theory (Stanford University)
- Machine Learning (Stanford University)
- Principles of Computing 1&2 (Rice University)

# Honors & Awards

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## Udacity & Google

ANDROID PROGRAMMER PATH SCHOLARSHIP

Zagreb, Croatia

Jan 2017

- Google's Associate Android Developer Certification at the end of scholarship

## "Stipo Lozić-Baškarad" Foundation

SCOLARSHIP FOR TALENTED STUDENTS

Zagreb, Croatia

Oct 2015 - Oct 2018

## Faculty of Electrical Engineering and Computing

"JOSIP LONČAR" AWARD

Zagreb, Croatia

Nov 2016

- Award for best students in class, top 1%
- Academic year 2015/2016 (third year of study)

## Faculty of Electrical Engineering and Computing

"JOSIP LONČAR" AWARD

Zagreb, Croatia

Nov 2015

- Award for best students in class, top 1%
- Academic year 2014/2015 (second year of study)

## A\*STAR

SINGAPORE INTERNATIONAL PRE-GRADUATE AWARD (SIPGA)

Singapore, Singapore

Jul 2015

- "... short-term research attachments for international students ..."

## Faculty of Electrical Engineering and Computing

"JOSIP LONČAR" AWARD

Zagreb, Croatia

Nov 2014

- Award for best students in class, top 1%
- Academic year 2013/2014 (first year of study)

## Rotary International

HIGH SCHOOL EXCELLENCE AWARD

Varaždin, Croatia

May, 2013

- Award for best high school students in class

# Skills

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## Programming languages

Python, Java, C, PHP, Bash

## Technologies

git, mercurial, MySQL, PostgreSQL, Hadoop, Vagrant, Docker, Spring, Symfony, Doctrine

## Languages

English B2