

# Sharad Agarwal

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## EDUCATION

### UNIVERSITY OF SPLIT

DIPLOMA IN HIGH THROUGHPUT  
DISTRIBUTED COMPUTING  
May 2019 | Split, Croatia

### VIT UNIVERSITY

BTECH IN COMPUTER SCIENCE AND  
ENGINEERING  
May 2018 | Chennai, India  
Cum. GPA: 8.98/10

## LINKS

Github:// [sharad1126](#)  
LinkedIn:// [sharadagarwal1126](#)  
Twitter:// [@shad1126](#)  
Quora:// [Sharad-Agarwal-21](#)  
Medium:// [@shad1126\\_91456](#)

## COURSEWORK

### UNDERGRADUATE

Information Security  
Computer Networks  
Operating Systems  
Agent Based Intelligent Systems  
Programming Language Translators  
Concurrent and Distributed Systems  
Modeling and Simulation

## SKILLS

### PROGRAMMING

• Python • Shell • HTML • CSS  
• Javascript • PHP • MySQL • MongoDB  
• LaTeX • C++

Familiar:

• C • iOS(swift) • Android • Assembly

### CYBER SECURITY

• Web Application Security(VAPT)  
• Nmap • Metasploit  
• Cyber Forensics(mobile, email, banking,  
e-commerce, reverse engineering, social  
engineering)  
• Cyber Laws

### DEVOPS

• Git • Docker • Elastic Search • AWS  
EC2 • Gitlab • Puppet • JIRA  
• Operating Systems(Mac OS,  
Linux(RedHat, Kali, Santoku, CentOs,  
Ubuntu))

## EXPERIENCE

### EUROPEAN ORGANIZATION FOR NUCLEAR RESEARCH (CERN)

PROJECT ASSOCIATE, AFFILIATION UNIVERSITY OF WISCONSIN MADISON  
Jul 2018 onwards | Geneva, Switzerland

- DevOps in Monte Carlo Production and Data Reprocessing Team at Compact Muon Solenoid (CMS) Experiment.
- Managing thousands of requests producing petabytes of data per month.
- Using HTCondor, Phedex and other inhouse developed softwares over the Worldwide LHC Computing Grid.

### DOCTORS EMERGENCY RESCUE TASK (DERT APP) | FOUNDER AND SYSTEM ADMINISTRATOR

May 2016 – May 2018 | Dehradun, India

- Lead a team to develop a cross-platform app to secure doctors from violence which has been accepted and recognized by the Indian Medical Association.
- Used by more than 160 doctors in the city.
- Featured in media - Wittyfeed, Kenfolios, Times Of India, Student Stories, Choutha Sansar, People's Samachar and Freepress.

## RESEARCH

### EUROPEAN ORGANIZATION FOR NUCLEAR RESEARCH (CERN)

#### CYBER SECURITY INTERN

Jan 2018 – Jun 2018 | Geneva, Switzerland

- Worked with the Computer Security Team to develop a software to detect Internet of Things (IoT) devices and tell the manufacturer, model and firmware of the device.
- Finding IoT devices on the network, performing Vulnerability Assessment and mitigating them by contacting the device owners through a platform called FIR.
- All code was reviewed, perfected, and pushed to production.

### EUROPEAN ORGANIZATION FOR NUCLEAR RESEARCH (CERN)

#### OPENLAB SUMMER STUDENT

Jun 2017 – Aug 2017 | Geneva, Switzerland

- Worked with the Computer Security Team to find Internet of Things (IoT) devices on the network, performing Vulnerability Assessment and mitigating them by contacting the device owners through a platform called FIR.
- Tried to map the CERN network on a graph which was not possible due to TBs of logs produced every hour.

### NATIONAL CYBER DEFENSE RESEARCH CENTRE (NCDRC)

#### RESEARCH INTERN

Jan 2017 – May 2017 | Chennai, India

- Published a research proposal on 'Internet Censorship in India' and submitted to the Internet Regulatory Authority of India(TRAI).

### CYBER CRIME CELL, HARYANA POLICE | CYBER SECURITY INTERN

Jun 2016 – Jul 2016 | Gurugram, India

- Developed a comprehensive call data record analyzer and also plotted the location of the cellphone on Google Earth by creating the KML file.
- Conducted a research on mobile crime analysis and successfully submitted a report on it.

## CERTIFICATIONS

- Red Hat Certified System Administrator

## TALKS

### **MCM/PMP TUTORIAL, CMS WEEK 2019, CERN**

Gave a tutorial on Computing Operations: submitting requests, checking status and submitting campaigns

### **PPD WORKSHOP 2019, CERN**

Presenting and explaining about the Computing Operations' issues to the Particle Physics Department

### **ROYAL COLLEGE OF ARTS, LONDON**

Invited Speaker and mentor at the Grand Challenge 2018 to give a presentation on IoT Security and CMS Computing Operations at CERN

### **IT LIGHTNING TALKS, CERN**

Presented the work on IoT Device recognition and security analysis

### **OPENLAB IT LIGHTNING TALK, CERN**

Won the first prize for presenting IoT Security at CERN

## HACKATHONS

### **CERN WEBFEST STOOD 2ND OUT OF 15 TEAMS**

Jul 2017 | CERN, Switzerland

- Developed an AR iOS app in swift with 3D models designed using Blender and used original experiment data from iSpy WebGL.

## PUBLICATIONS

- Detecting IoT Devices and How They put Large Heterogeneous Networks at Security Risk (October 2019), 7th Control System Cyber-Security Workshop (CS)2/HEP, New York, USA
- Acknowledged in : Hannah S. (May 2019) Security for Science: How One Thing Leads to Another. Springer. [https://doi.org/10.1007/978-3-030-15705-0\\_7](https://doi.org/10.1007/978-3-030-15705-0_7)
- Oser P., Agarwal S. (June 2018) Computer Security: Smile you're on camera, CERN
- Agarwal S., Patel F., Chaturvedi P., Asha S. (May 2018) A Novel Approach for Communication among Blind, Deaf and Dumb People. International Journal of Pure and Applied Mathematics. ISSN: 1314-3395
- Agarwal S., Thomas A. (Dec 2017) Internet Censorship in India, NCSSS Summit, 2017, BITS Goa
- Agarwal, Sharad, Oser, Pascal, Short, Hannah, & Lueders, Stefan. (2017, October 23). Internet of Things (IoT) security. Zenodo. <http://doi.org/10.5281/zenodo.1035034>

## WORKSHOPS AND SUMMER SCHOOLS

- CERN School of Computing 2019, Romania
- Gridka School 2019, KIT
- Thematic CERN School of Computing 2019, Croatia
- Applied Machine Learning Days 2019, EPFL Lausanne
- CERN Whitehat Training Workshop, 2018