Sharad Agarwal

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EDUCATION

VIT UNIVERSITY
BTech in Computer Science and Engineering
May 2018| Chennai, India
Cum. GPA: 8.98/10

LINKS

Github:// **sharad1126**
LinkedIn:// **sharadagarwal1126**
Twitter:// **@shad1126**
GoogleScholar:// **Sharad-Agarwal**
ResearchGate:// **Sharad_Agarwal8**

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 • Burp Suite
• 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))

CERTIFICATIONS

RED HAT CERTIFIED SYSTEM ADMINISTRATOR

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 in-house 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 identify 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 detect Internet of Things (IoT) devices by scanning the network, performing Vulnerability Assessment and mitigating them.
• 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.

TALKS

7TH CONTROL SYSTEM CYBER-SECURITY WORKSHOP (CS)2/HEP, NEW YORK, USA

Detecting IoT Devices and How They put Large Heterogeneous Networks at Security Risk (October 2019)

MCM/PMP TUTORIAL, CMS WEEK 2019, CERN

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

PPD WORKHSHOP 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

ONLINE CERTIFICATIONS

ADVANCED CERTIFICATE IN INFORMATION SECURITY

OSEI44 SERVER SECURITY
OSE43 INFORMATION TECHNOLOGY SECURITY
OSEI41 INFORMATION SECURITY
OSEI42 SECURING INTERNET ACCESS

HACKATHONS

THE PORT HUMANANITARIAN HACKATHON Selected Participant

Oct 2019 | CERN, Switzerland

- Developed a web application to preserve and promote the heritage of traditional cultural food using image recognition and recommendation system.

CERN WEBFEST Stood 2nd out of 15 teams

Jul 2017 | CERN, Switzerland

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

PUBLICATIONS

- Agarwal, S.; Oser, P.; Lueders, S. Detecting IoT Devices and How They Put Large Heterogeneous Networks at Security Risk. Sensors 2019, 19, 4107.

- Agarwal S., Oser P., Lueders S., Detecting IoT Devices and How They put Large Heterogeneous Networks at Security Risk.(Preprint, doi: 10.20944/preprints201908.0295.v1)

- 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

- 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

SUMMER SCHOOLS AND WORKSHOPS

CERN SCHOOL OF COMPUTING 2019, ROMANIA Diploma in Physics Computing, Software Engineering and Data Technologies

Sep 2019 | Cluj Napoca, Romania

- Babes Bolyai University
- Earned 5 ECTS with the diploma

THEMATIC CERN SCHOOL OF COMPUTING 2019, CROATIA Diploma in High Throughput Distributed Computing

May 2019 | Split, Croatia

- University of Split

GRIDKA SCHOOL 2019, KIT

APPLIED MACHINE LEARNING DAYS 2019, EPFL LAUSANNE

CERN WHITEHAT TRAINING WORKSHOP, 2018