

# Shivani Singh

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📁 shivani-1521.github.io

## Education

- 2016-2021 **Birla Institute of Technology and Science, Pilani, India.**  
Bachelor of Engineering (Hons.) in Electrical and Electronics (Integrated Dual Degree)
- 2014-2015 **St. Michael's High School, Patna, India.**  
All India Senior School Certificate Examination (C.B.S.E. Class12), Percentage: 94.4/100

## Experience

- June - current 2021 **Max Planck Institute for Informatics, Research Intern** with Prof. Anja Feldmann.  
Evaluated consistency in web cookie measurements in consecutive observations from a given location and between different locations using statistical tests.
- Jan - May 2021 **Max Planck Institute for Informatics, Undergraduate Thesis** with Prof. Anja Feldmann.  
Analyzed the effect of client's geolocation on web cookie characteristics from different vantage points. Examined the effect of privacy laws on the third parties and nature of tracking exposed to clients. [\[Thesis\]](#)
- May - July 2019 **American Express, Bangalore, SWE Intern.**  
Implemented data access layer for Redis cache with inherent concurrency support. Developed interface for fast and buffered Prometheus metrics.
- May - July 2018 **Power Grid Corporation of India, Hyderabad, Summer Intern.**  
Created models for minimum bid forecast of power transmission utilities.

## Publication

- Accepted 'Machine Learning Assisted Security and Privacy Provisioning for Edge Computing: A Survey', **Shivani Singh**, Razia Sulthana, Tanvi Shewale, Vinay Chamola, Abderrahim Benslimane, and Biplab Sikdar, ([IEEE Internet of Things Journal](#) 2021) [\[Paper\]](#).

## Projects

- April - June 2020 **DNS Privacy, Remote project**, Dr. B. Chandrasekaran, Vrije Universiteit.  
Inspected privacy related implications of DNS resolution at the client stub resolver.
- Jan - March 2020 **Deploying containerized applications, Remote project**, Dr. B. Krishnamachari, USC Viterbi.  
Experimented with running the Kubernetes based software Jupiter on Common Open Research Emulator.
- Mar - April 2019 **Support Google Cloud backend in CoreDNS, GSoC Application**, Dr. Yong Tang, CoreDNS.  
Feature exposed cloud vendor specific endpoint to clusters managed by Kubernetes. Created better access for retrieving resource records through Google Cloud API. [\[Code\]](#)
- May - July 2018 **Developing the instructional operating system PintOS, Course project.**  
Implemented syscalls to support user programs and modified shell to resolve program names. [\[Code\]](#)

## Academic Achievements

- 2019 Awarded to attend Grace Hopper Celebration India, Asia's largest event for women in computing.
- 2019 1st Runner-up Paper Presentation in Apogee, presented 'Improved Paxos Consensus Algorithm'.
- 2018 Recipient of BITS Pilani alumni grant.

## Technical Skills

- Languages - Golang, C/C++, Python, Matlab.
- Courses - Data Structures and Algorithms, Internet of Things, Operating System, Object Oriented Programming, Microprocessors and Interfacing, Probability and Statistics.