

# Eklavya Sharma

<https://sharmaeklavya2.github.io>

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## Education

### IISc Bangalore

M.TECH. (RESEARCH) IN CS

July 2019 - Present

Bangalore, India

### BITS Pilani

BE IN COMPUTER SCIENCE

August 2014 - June 2018

Pilani, Rajasthan, India

GPA: 9.14 / 10

### Amity Saket

CBSE SCIENCE

April 2011 - May 2013

New Delhi, India

Score: 91.6 %

## Research Interests

Algorithms, Complexity, Graph Theory, Cryptography

## Links

Github:// [sharmaeklavya2](#)

LinkedIn:// [sharmaeklavya2](#)

Codeforces:// [eku](#)

ICPCID:// [5CN1FMJ0JIDP](#)

## Selected Coursework

### BITS Pilani

Advanced Algorithms and Complexity

Discrete Structures in Computer Science

Design and Analysis of Algorithms

Cryptography

Graphs and Networks

Theory of Computation

Data Structures and Algorithms

Logic in Computer Science

Machine Learning

Computer Networks

and many more (see transcript)

## Skills

### Programming Languages

C/C++, Python, Java, Bash, JavaScript

### Software Libraries

NumPy, Pandas, Scikit-Learn, Apache

Spark, TensorFlow, Django

### Other Languages

SQL,  $\text{\LaTeX}$ , HTML, CSS

## Experience

### media.net | PLATFORM ENGINEER

August 2018 - July 2019 | Bangalore, India

- media.net is an online advertisement company. I worked on improving their real-time bidder.

### American Express | INTERN

Jan 2018 - June 2018 | Gurgaon, India

- Trained a neural network to estimate the probability of a credit-card applicant defaulting. A custom architecture was used because data was semi-structured.

### Directi | INTERN

May 2017 - July 2017 | Mumbai, India

- Made Directi's news article classification algorithm recognize more categories.

### Zulip | GOOGLE SUMMER OF CODE STUDENT

May 2016 - Aug 2016

## Projects

### Analysis of Primality-testing Algorithms Oct 2017 - Nov 2017

'ADVANCED ALGORITHMS AND COMPLEXITY' COURSE PROJECT

- Studied the AKS primality-test and attempted to improve it.
- Compared compositeness-proving algorithms.

### Mitigating DNS-based DoS attacks using SDN Sept 2017 - Dec 2017

- Devised a mitigation mechanism for DNS amplification attacks which uses a set of geographically-distributed SDN routers.
- Presented a paper on it in Sept 2018 at ICCACI.

### CT-means clustering algorithm Sept 2017 - Dec 2017

- Invented a fast approximation algorithm for C-means clustering.
- Mathematically proved its convergence and approximation guarantee.
- Implemented and benchmarked the algorithm. It wasn't fast enough in practice.

## Achievements

### ACM-ICPC on-site regionals

~3000 teams participate in ACM-ICPC India online qualifying round annually. Top few teams qualify for on-site contests. My team ranked 29/250 in 2017, 66/450 in 2016, 88/250 in 2015 in Amritapuri and 30/70 in Kharagpur 2016.

### BITS-Pilani Merit Scholarship FOR TOP 2% CGPA IN 3 SEMESTERS

### GATE CS: All-India rank 86 / ~100k March 2018

## Societies

### BITS-ACM BITS-PILANI ACM STUDENT CHAPTER

- Problem setter for 3 programming contests organized by BITS-ACM.
- Created backends for web applications used in online quizzing events.
- Conducted intra-BITS-ACM workshops on Linux and CLI.