

# Rishabh Gupta

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## EDUCATION

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### Indian Institute of Science, Bangalore

*M.Tech (CSA) guide: Prof. Chiranjib Bhattacharyya*  
CGPA: 9.0/10

**Bengaluru, KA**

2018 - 2020

### Guru Ghasidas Vishwavidyalaya (Central University)

*B.Tech (Computer Science and Engineering) guide: Prof. Nishant Behar*  
CGPA: 8.64/10

**Bilaspur, CG**

2014 - 2018

## EXPERIENCE

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### Flipkart

*Data Scientist*

**Bangalore**

*August 2020 - Present*

- Part of Seller and Supplier Ecosystem team. Working on E-invoicing project, extracting data from vendor invoice images (Document AI).
- Also worked in comment moderation (NLP).

### LinkedIn

*Summer Intern*

**Bangalore**

*May 2019 - July 2019*

- Finding overlapping communities in LinkedIn's connection network and identifying the member features which are important for connection and community formation.
- Part of my MTech thesis, worked in the AI team.

### IIT Bombay

*Summer Intern*

**Mumbai**

*May 2017 - July 2017*

- Worked in the project titled Gamification Framework (ekShikshaProject).
- Created a generalized framework which allows teachers to create game-based curriculum, which students can play and eventually learn at their own pace. This requires gamification of learning, by adding game features to the e-learning environment. It also required us to create web games to incorporate into it.
- Worked under the guidance of Prof D.B. Phatak
- Worked on Javascript, JSP, Three.js, Game Development

## PROJECTS

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### Overlapping Community Detection and Network Analysis

*MTech Project*

*May 2019 - July 2020*

- Finding overlapping communities in a network using stochastic variational inference on a generative model.
- Uses assortative-Mixed membership stochastic blockmodel.
- Compared various other methods for finding overlapping communities.
- Analysing networks using these underlying communities and finding core and bridging nodes in the network.

### Graph Representation Learning

*Machine Learning Course Project*

*March 2019 - April 2019*

- Explored different methods for embedding graph nodes like deepwalk, node2vec, etc.
- Performed various experiments like link prediction and label classification on real world datasets using those node embeddings.

## Badminton Stroke Classification

*Data Analytics Course Project*

*Nov 2019 - Dec 2019*

- Detecting the class of badminton stroke from sensors' data.
- Time varying accelerometer and gyroscope sensor data from a device attached to player's wrist (similar to a smart watch).
- An end-to-end ML project, from collecting data and preprocessing to final model evaluation.
- Used classical ML techniques like random forests, gradient boosting, SVM, etc. and deep learning models for time-series data like LSTM and 1D CNN. (Using sklearn and tensorflow).

## Topological Data Analysis on Dynamic graphs

*Computational Geometry and Topology Course Project*

*Feb 2019 - April 2019*

- Applied TDA on time-varying graphs. Extracting persistence diagrams of each snapshot and comparing their pairwise Bottleneck/Wasserstein distances.
- Obtained a timeline plotting first dimension of classical MDS against time for analysis. This gave us the insights of the variations in the data over time.
- Used TDA libraries like Gudhi, Dionysus 2, TDA package in R.

## 1D Landscape Profile

*Computer Graphics and Visualization Course Project*

*Sept 2019 - Oct 2019*

- Created a tool to construct landscape profile for any given augmented join tree extracted from a scalar field, clustering data, 3D model or any other domain. (used D3.js)

## Feature Selection Using Genetic Algorithm

*BTech Final Year Project*

*Jan 2018 - May 2018*

- Reduced the number of features in a dataset using genetic algorithm as the optimization technique. Selected the suitable features while keeping the accuracy of the classifier as high as possible.

## COURSES

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- **IISc:** Practical Data Science, Machine Learning, Deep Learning, Computational Methods of Optimization, Data Analytics, Stochastic Models and Applications, Bioinformatics, Computational Geometry and Topology, Graphics and Visualization, Linear Algebra and Probability, Design and Analysis of Algorithms, Theory and Practice of System Security.
- **Online:** Probabilistic Graphical Models Specialization (Coursera), Deep Learning (IITM), Statistic (Udacity)

## POSITIONS HELD

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- Member of Sponsorship Team for CSA, IISc Open Day 2020.
- Placement coordinator, CSA IISc 2018-20 batch.
- Technical Adviser for coding events in Equilibrio 2017 (GGU TechFest), organised 4 events, managing a team of 20 members.

## ACHIEVEMENTS

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- Secured All India Rank - 2 among 107,893 candidates in GATE 2018 in Computer Science with a perfect score of 1000.
- Selected for ACM-ICPC Asia onsite regionals (Chennai) (2017)
- Secured 4th rank in Kurukshetra (RoboWar) event in OJASS'16-NIT Jamshedpur
- Secured 2nd rank in Vic-Toy-Rie (Line Follower) event in OJASS'16 - NIT Jamshedpur
- Secured 2nd rank in Line Follower event in Ignus'15 - IIT Jodhpur