


# Ishika Soni

Final Year Undergraduate  
Computer Science & Engineering

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## Educational Qualifications

Year	Degree	Institution	CGPA/%
2018	B.Tech. Computer Science & Engg	Indian Institute of Technology, Kanpur	8.8
2014	Twelfth Grade	St. Teresa School	94.8%
2012	Tenth Grade	St. Teresa School	10/10

## Work Experience

*Goldman Sachs, Bangalore* (Software Engineer) Summer 2017

- Improved the internal version control system by adding support for testing of code in an atomic manner
- Integrated the version control system into the firm's stateless distributed system for company wide deployment
- Received a *Pre-placement offer* from Goldman Sachs for outstanding performance

*IITK-NYC Office* (Backend/Frontend Developer) Summer 2016

- Worked with state-of-the-art in microservice based systems, technology stack involving latest languages & frameworks
- Created application by using technologies like HTML, CSS, Angular, TypeScript and Scala for backend

*Microsoft India Development Center, Hyderabad* (App Developer) Summer 2015

- Developed a cross-platform application for ad-hoc sharing of pictures using Xamarin SDK and Azure Mobile Services
- Implemented application logic to generate intelligent thumbnails and used SQL database for storing relation data

## Academic Achievements

- Secured an All India Rank of 652 in JEE-Advanced (2014)
- Qualified pre-final level of Special Class Railway Apprentice (SCRA) examination (2014)
- Accomplished National Standard Examination in Chemistry (NSEC) (2014)
- Secured an All India Rank of 119 in Kishore Vaigyanik Protsahan Yojana (KVPY) examination (2012)
- Certified Regional Mathematics Olympiad (RMO-Delhi) (2012)
- Accomplished pre-final level of National Talent Search Examination (NTSE) (2009)

## Relevant Courses

- Data Structures & Algorithms
- Computer Organization
- Compiler Design
- Logic in Computer Science
- Computer Security
- Numerical Analysis
- Machine Learning
- Operating Systems
- Probability & Statistics
- Databases
- Linear Algebra
- Abstract Algebra

## Technical Strengths

*Programming Languages:* C/C++, Java, Scala, Shell

*Tools and Platforms:* Git,  $\LaTeX$ , Linux, Windows

*App Dev:* Android, Windows, Xamarin Forms

*Web Dev:* Scala, HTML, TypeScript, CSS, Django

## Positions of Responsibility

*Course Tutor:* Fundamentals of Computing

*Internship Coordinator:* Students' Placement Office, IITK

*Academic Mentor:* Fundamentals of Computing

## Course Projects

- C-MIPS Compiler* Compiler Design
- Stock Market Analyzer* Principles of Database Systems
- Online Course Feedback* Computing Laboratory
- NACHOS* Operating Systems
- Survey of Efficient Kernel Methods* Machine Learning
- Paradoxes in Probability* Discrete Mathematics

## Research Projects

**Approx Learning of Graphical Models w/ Hidden Vars**

*Mentor: Prof. Nicholas Ruozi, UT Dallas (Summer 2016)*

- Learnt translating probabilistic inference problems into graphical models which are used as a basis of designing efficient inference algorithms
- Studied about marginal structured SVMs and the algorithms based on Belief Propagation and Bethe Free Energy

## Coresets

*Mentor: Dr. Piyush Rai, IIT Kanpur (Summer 2016)*

- Analyzed various approximations of the dataset for computationally complex algorithms via coresets formation
- Learnt representing a signal or data as linear combination of some column of sparse matrix i.e. Dictionary Learning

## Badminton Playing Robots - Robocon 2015

*Mentor: Dr. Bhaskar Dasgupta, IIT Kanpur (Semester 1, 2)*

- Programmed a robot to track and predict the trajectory of shuttlecock using computer-vision techniques
- Implemented Kalman filter based approach to predict trajectory of the shuttlecock using depth video feed
- Secured 11th position among the 85 participating teams from all across the country