

Rajat Maheshwari

4th year CSE undergraduate

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EDUCATION

University school of information, communication & technology, GGSIPU, Delhi Aug 2015 - Present
Bachelor of technology in Computer Science and engineering; CGPA: **8.44/10.0**

Rajkiya pratibha vikas vidyalaya, Delhi Aug 2012 - July 2014
12th standard; **97.3%**(PCM)

Mukherji Memorial SSS, Delhi Aug 2007 - July 2012
10th standard; CGPA: **10.0/10.0**

EXPERIENCE

Indraprastha Institute of Information Technology, Delhi Aug 2018 - Present
Mentor: Dr. Rajiv Ratn Shah.

Working on a wide array of problems related to digital media, currently working on improving an audio pipeline and designing a novel model for lip reading, small and fast enough to be able to work on smart phones.

Indian Institute of Technology, Delhi Feb 2018 - Present
GIPEDI Batch 1 Intern Mentor: Dr. Prathosh A.P.

Currently working on a wearable technology for women's safety which uses technologies like speech recognition and computer vision, details of which cannot be revealed for obvious reasons.
Unofficially following course Advanced Machine Learning

Defence Research and Development Organisation, SAG Lab, Delhi Jun 2017 - Sep 2017
Summer Intern Advisor: Mr. BharatLal Jhangid

Learn and implemented Machine Learning & **Evolutionary Computation** techniques (Swarm intelligence) in MATLAB. I studied number of Intrusion attacks and came up with an **adaptive layered framework** using machine learning techniques for intrusion detection on **NSL KDD** dataset.

Microsoft Student Partner Aug 2017 - Present
Attended sessions/workshops on different microsoft technologies like Azure. Interacting with Microsoft Valued Professionals and staying updated about the IT industry and technologies around the world.

ACHIEVEMENTS AND AWARDS

ACM ICPC India Finals 2017
-ACM-ICPC Asia India-FINAL Rank: **35** IITM, Gwalior
-ACM-ICPC Asia Kolkata Regional Contest Rank: **20**
-Rank **55th out of 2925** teams in Online Qualification Round for ACM ICPC Indian Regional

Academic Excellence 2017
Currently ranked **1** in Department
Ranked **1** out of 180 students in first year (highest YGPA)

Deloitte Innovation Award 2018
Received Deloitte Innovation Award in Smart India Hackathon 2018 NCL, Pune
Worked on the problem of risk assessment of fire hazard in coal mines
Ranked 4th out of 53 teams

Notable Ranks in online contests 2016-2017
Hackerrank: Week of Code 34 (*Gold medal*, Ranked **165/11299**)
Hackerearth: March Circuits (*Worldwide*, under Top **20** out of 4287)
Codechef: September Challenge-Top 3 **Approximation Problem Solver** (*Indian*, Rank **2** out of 9880)
April Lunchtime (*Indian*, Rank **8/1183**)

Selected for summer schools of Computer vision and Machine Learning at IIITH June 2018

PROJECTS

Smart India Hackathon
Exam Monitoring App

Mar 2017
RKGIT, Ghaziabad

Implemented an algorithm using Kdtree (K nearest neighbour) to allocate exam centres to students
Used google Maps API to predict the walking distance and time
OpenCV to detect fingerprint

Vistara Hackathon

Oct 2017

NxtMile- Satellite Imagery and Data analytics to predict next ideal station

NASSCOM, Delhi

Use image analytics on satellite images to come up with indisputable metrics to accurately estimate real estate trends, monitor new industrial ,mining and sales opportunities
Classified areas as organised, unorganised or commercial
Time series data to get insight about the growth of city
Neural networks to analyse historical airline traffic time series data

TSP solution

ACO(ant colony optimization) for the solution of travelling salesman problem, language used- MATLAB, link
Near optimal solution of Travelling salesman problem using **simulated annealing** with 2opt optimization and boltzman distribution equation to calculate probability, language used- Python, link

Other Projects

Some other small projects I've worked on, are available on my github (<https://github.com/tommytrash00>)

EXTRA CURRICULARS**Teaching**

Taught **3** govt. school students under **IEEE Umang Program**, got featured in **THE HINDU**
Won 2017 **Darrel Chong Student Activity Award** (*Bronze*)
Part of **TeachForIndia**, take weekly sessions on technologies like Arduino, C, basic electronics etc. in low income schools of Dwarka

Leadership Roles

Secretary of training & placement department, USICT, responsible for planning events and managing PR team
Mentor & Ex-Secretary of Competitive Programming Club (*Codeschool*)- organise sessions on Algorithms & Data Structures, manages the fb page with 600+ members
Head organiser of Programming related events in our techfest (*Infoexpression*), managed and supervised **8** events

Others

Anchor for the event of Monoacting in Anugoonj, Annual Cultural Festival of GGSIPU & in several other events

TECHNICAL SKILLS

Strongest areas: Algorithms, Data Structures, Machine Learning, Computational geometry

Proficient: C++, Python, Matlab, Scikit-Learn, WEKA

Familiar: Java, Maple, Tensorflow