

HITESH GUPTA

Fourth Year Undergraduate

Civil Engineering · Indian Institute of Technology Kanpur

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EDUCATIONAL QUALIFICATIONS

Degree	Year	Institution/Board	CGPA/%
B. Tech	2016 - Present	IIT Kanpur	9.05/10.0
Sr. Secondary	2016	Rajasthan R.B.S.C	91.2%
Secondary	2014	Rajasthan R.B.S.C	95.0%

ACADEMIC ACHIEVEMENTS

- Awarded **Academic Achievement Award** for notable performance in 2nd year.
- Secured All India Rank of **630** in **KVPY(Kishore Vaigyanik Protsahan Yojna) 2016**.
- Secured All India Rank of **2660** in **JEE (Advanced) 2016** given by about 200 thousand students.
- Secured All India Rank of **1804** in **JEE (Mains) 2016** given by about 1.4 million students.
- Secured State Rank **15** in **SOF-IMO (International Mathematics Olympiad) 2015**.
- Secured State merit **16th** in Secondary Examination (RBSE).

INTERNSHIPS

- **Retrieval-based Chat Bot** May '19 - Present
EJET Systems, ML and NLP
 - Handled full development of a hotel assistant bot.
 - Built a Food Entity Recognition model to identify food items in a sentence, along with quantity, attribute, and toppings using NLTK.
 - Built Food Recommendation model using word embedding and also devised an algorithm to recommend food with respect to multiple food items.
 - Developed a binary sentimental analysis model using word embedding and classification using random forest classifier.
 - Researched robust image hashes that are immune to typical image transformations, while being sensitive to malicious image edits such as face swaps, deep fakes, object addition/deletion.
 - Constructed models that take an image and output a binary hash that would give lower *Hamming distances* for hashes of similar images while giving more considerable distances for dissimilar images.
 - Developed a *framework* for testing against transformations like compression, contrast changes, blurring, warping.
 - Trained various novel network architectures on the *triplet loss* along with *mining* of examples for improved training.
 - Tested the networks against *adversarial attack* methods such as *FGSM*, *Projected Gradient Descent*.

PROJECTS

- **FIR Management System** Jan '19 - Apr '19
Prof. Arnab Bhattacharya [📄https://github.com/hitesh-gupta-2111/FIR-Management-System](https://github.com/hitesh-gupta-2111/FIR-Management-System)
 - Designed a FIR management system by using Apache, MySQL, PHP.
- **GeoInformatics Project** Aug '18 - Dec '18
Prof. Salil Goel, CE331A Course Project
 - Used instruments like Auto-level, GPS, Total station for collecting data of given site.
 - Used QGIS software for making Map from collected data.
- **Project on Structural Stability** Summer '18
Prof. Suparno Mukhopadhyay

- Analysed structures for their stability and strength using MATLAB.

- **Crude Oil Pump**

Jan '18 - Apr '18

Course Project, TA201A

- Designed (in AutoCAD), manufactured and assembled a small model of a crude oil pump.
- Used techniques like welding, brazing and bending to fabricate the model.

- **Rice Huller Machine**

Aug '17 - Nov '17

Course Project, TA202A

- A small machine which can be used at home easily to remove husk.
- Designed (in AutoCAD), manufactured and assembled a mechanism to remove the husk of rice in which the grain is crushed by two rubber coted rollers. Used machining techniques like lathing, milling, drilling to fabricate the model.

TECHNICAL SKILLS

- **Programming Languages:** Python, C, C++, L^AT_EX, MySQL
- **Software and Utilities:** TensorFlow, PyTorch, Numpy, MATLAB, Sqlite3, QGIS, Autodesk (CAD) Inventor

RELEVANT COURSES

Introduction to C	Data Structure	Algorithms
Data Base Management System	Machine Learning (Coursera)	Introduction to Linear Algebra
Applied Probability and Statistics	Introduction to Economics	Partial Differential Equation

POSITIONS OF RESPONSIBILITY

- **Senior Executive (Show Management)**

Apr '17 - Apr '18

Techkriti'18, Reportedly Asia's Largest Technical Festival

- Oversaw the completion of four Robotics competitions (Robowar, Manoeuvre, IARC, AIRC) by inspecting and distributing the logistics for the events and supervised the conduction of workshops.
- Recruited and managed a team of 4 junior executives for the successful completion of competitions by motivating and assigning them to several tasks to ensure smooth conduction of events.

MISCELLANEOUS

- Active on Codeforces.
- Winner in archery workshop in March 2018.
- Second runner up in Concrete Quiz organised by Techkriti-2018.
- Participated in instant Hindi speech competition in Galaxy'17 (annual inter-hostel festival, IIT Kanpur).
- Second runner up in district level debating competition.
- **Hobbies:** Playing table tennis, pool, painting & swimming.