

Robin Singh

Senior Year BS-MS Dual Degree Student
Department of Mathematics and Statistics

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EDUCATION:

Year	Qualification	Institute	CGPA/%
2015-2019*	B.S in Mathematics and Scientific Computing	Indian Institute of Technology, Kanpur	7.6*
2014	CBSE AISSE (XII)	Tagore Baal Niketan, Karnal	93.0
2012	CBSE AISSE (X)	Tagore Baal Niketan, Karnal	10.0

ACADEMIC ACHIEVEMENTS:

- Secured **AIR 1131** in JEE Advanced 2015 amongst 150,000 Candidates
- Secured **AIR 4** in AIEEA UG 2015 conducted by ICAR (Indian Council of Agricultural Research)
- Secured **Class I** in ISTE 2009 (International Science Talent Examination)

INTERNSHIPS:

- Data Scientist** **Ridlr, Mumbai** acq. by **OLA Cabs** *May'18-Jul'18*
 - Developed a **Computer Vision** based Automated Toll System using **YOLOv3** object detection alg.
 - Built a **TCP** and **HTTP** based client-server system to automate all the toll lanes.
 - Implemented a **DBMS**(MySQL & Redis) and a dashboard for real-time toll-booths monitoring.
 - Integrated **ANPR**(Automatic Number Plate Recognition) based on **OpenALPR**.
- Research Assistant** **Indian School of Business, Hyderabad** *May'17-June'17*
Under: Prof. Subhas Chandra Mishra, Department of IME, IIT Kanpur
 - Project aimed at **Data Mining** and Hospital **Network Analysis** using Graph Theory.
 - Visualized network graphs using **NetworkX** and calculated various **centrality measures**.
 - Used the parameters to find connections between the hospital facilities and staff appointed.

PROJECTS:

- Word Sense Disambiguation in Natural Language Processing** *Nov'17-Jan'18*
Under: Prof. Harish Karnick, Department of CSE, IIT Kanpur
 - Incorporated **bidirectional-LSTMs** and **attention** based model architectures.
 - Increased POS tagging accuracy by using Conditional Random Fields (**CRF**) instead of Softmax.
- Fake News Detection** *Jan'18-May'18*
Course Project Under: Prof. Harish Karnick, Department of CSE, IIT Kanpur
 - Implemented **3HAN** architecture to achieve state of the art accuracy on detecting false news.
 - Proposed **Attention Integrate** model which incorporated headlines and attention based Mechanism.
- Multivariate EM Algorithm for detecting fake currency** *Jan'18-May'18*
Course Project Under: Prof. Debasis Kundu, Department of MTH, IIT Kanpur
 - Designed a **Gaussian Mixture Model** along with the **EM** algorithm to classify the currency.
 - Built **Supervised** methods **SVM** and **Tree Ensembles** to compare with the **clustering** approach.

TECHNICAL SKILLS:

- Languages:** Python, MATLAB, C/C++, SQL
- Tools/Libraries:** Tensorflow, openCV, NLTK, Hadoop, Spark, Numpy, Scikit-Learn, pandas, Stan

KEY COURSES:

- Statistics:** Time Series Analysis*, Statistical Simulation and Data Analysis, Applied Stochastic Processes, Probability & Statistics, Introduction to Mathematical Modelling
 - Computer Science:** Computational Cognitive Science(**A***), Natural Language Processing, Data Mining*, Introduction to Machine Learning, Data Structures and Algorithms
- *:ongoing A*:Exceptional Performance

COMPETITIVE MACHINE LEARNING :

- Built a NLP based Question-Answering web app for PDFs in the **Microsoft's CodeFunDo:AI '18**.
- Secured 2nd position in College in AnalyzeThis2017 organized by **American Express** among the IITs.
- Secured 85th position in **IndiaHacks2017: Machine Learning** organized by HackerEarth.

POSITION OF RESPONSIBILITIES/ACTIVITIES :

- Coordinator, Student Film Society(SFS)**, Films and Media Council, IIT Kanpur *May'17-May'18*
- Company Coordinator, Student Placement Office**, IIT Kanpur *Aug'16-May'17*
- Member of the winning team in **Rube Goldberg** event for two consecutive years in Takneek '16 and '17.
- Part of team winning Gold in **Cricket Inferno 17**.
- Joined **NCC** for 1 year, learned shooting and awarded to the rank of **PILOT**.