

# KANISHK RANA

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## EDUCATION

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**Indraprastha Institute of Information Technology Delhi**

Bachelor of Technology

Department of Computer Science & Applied Mathematics

*2017 - Present*

CGPA: 7.93 (till 6<sup>th</sup> semester)

**SM Arya Public School, Punjabi Bagh**

Central Board of Secondary Education

*2015 - 2017*

Percentage: 93

## TECHNICAL STRENGTHS

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**Languages**

Python, JAVA, LaTeX

**Tools & Technologies**

TensorFlow, Keras, ArduPilot, Flask

**Licenses & Certifications**

[Deep Learning Specialization](#)

[Trading Strategies in Emerging Markets Specialization](#)

[IBM Data Science Professional Certificate](#)

[Machine Learning](#)

## INDUSTRIAL EXPERIENCE

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**Software Development Engineer Intern**

May 2020-Jul 2020

*Nucleus Software Exports, Noida*

- Internship task was to build a POC for code summarization and code documentation for a given Java code
- Actively researched the existing literature and built a preprocessing pipeline to use in conjunction with state of art summarization model deep learning concept of Transformer.
- Created a website, API and plugin for the task and achieved significant results.
- The code will be integrated in a system which will enable users to document their code automatically according to JavaDoc standard and search for a code using the summary provided.

**Subject Matter Expert Natural Language Processing**

June 2019-Sept 2019

*AnalyticsCosm, Remote Internship*

- Primary responsibility was to manage the teams of interns and was responsible for data acquisition from social media and classify images as shareable and unshareable using Machine Learning and Natural Language Processing techniques.
- Predictive model correctly classified the images with AUC 0.91.
- This project was aimed at small enterprises to help them create an online presence and was deployed using Amazon Web Services(AWS). This project helped the startup ink deals with 20 businesses and help them achieve an increase in growth of their social media presence by upto 40

**Data Science Intern**

June 2019-Sept 2019

*Aam Aadmi Party, Remote Internship*

- Responsibility included data acquisition for problems that were relevant to social causes like healthcare facilities , small enterprise loans , education etc and performing exploratory data analysis.

- Insights from these explorations were translated using data visualization techniques and formed the stepping stones for discussion on public policy

### **Machine Learning Intern**

June 2019-July 2019

*Verzeo, Remote Internship*

- Worked on text summarization and real time object detection using YOLO.
- Responsible for clearing doubts of other interns.

### **Content Writer**

Sept 2018-Dec 2019

*Feedough, Remote Internship*

- Responsible for writing SEO optimized articles for the [15th best startup website in the world](#).
- Wrote articles on business models, different strategies for startups in the area of hiring.

## **VOLUNTEER WORK**

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### **Student Teacher**

May 2018-June 2018

*Adarsh Public School*

- Taught STEM subjects to underprivileged students and also students who were considered academically weak
- Created Interactive lessons which helped students to improve their grades

## **PUBLICATIONS**

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### **Assessing risk of attacks in large networked system with Context Sensitive Probabilistic Modelling**

- IEEE International Conference on Multimedia Big Data : BigMM 2020
- Authors: Rahul Madaan, **Kanishk Rana**, Arun Balaji Buduru

## **PROJECTS**

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### **IoT Based Automatic Bed for Changing Diaper**

- Designed a bed to change the diaper of an adult person using a frame made up of MDP and controlled via an app made by MIT App Inventor. SMS alert for abnormal conditions was sent over SMS gateway using Twilio. The bed was named ABCD-399(Automatic Bed for Changing Diaper).
- Responsible for integration of app and hardware
- [Recognition by the National Daily for creating IoT Based Automatic Bed for Changing Diaper](#)

### **License Plate Recognition and Adversarial Learning**

- The project deals with development of a License Plate Recognition model using CNN and assessing the robustness of the state of art model against adversarial attacks which includes but not limited to procedural noise addition, single pixel perturbation and steganography
- The proposed attacks achieved 95% accuracy on average on 2 state of art models indicating deficiencies

### **Namease : Entrepreneurial Venture**

- Designed a website to generate names based on keywords and industry using NodeJS, Python, HTML and CSS. Generated revenue of 10k in the first month of operation.

### **Surveillance System for Detecting Unknown Person**

- Designed a surveillance system to detect unknown persons in a given area using OpenCV library of python with features of monitoring intrusions in real time

## Kaggle Machine Learning Challenge for Microsoft Malware Prediction

- Implemented a Machine Learning model using the massive dataset by Microsoft to predict if a machine will soon be hit with malware

## AWARDS AND ACHIEVEMENTS

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Recipient of the prestigious **JSTSE Scholarship**. Secured Rank-52 out of 15k students in Delhi State  
Bronze Medallist, 100m Sprint, Inter School, West Zone, Delhi  
Bronze Medallist, Hindi Essay Writing, West Zone, Delhi  
Found a bug in the famous milk delivery Country Delight app  
Secured 3rd Rank in India in InCTF by Amritapuri University Rank  
**NTSE Scholar Stage I** from Delhi Region

## EXTRA-CURRICULAR PARTICIPATION

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**Batch Representative**, IIIT Delhi's Placement Committee  
**Event Head**, Esya'18 – IIIT Delhi's annual tech fest  
**Quiz Master**, Trivialis – IIIT-Delhi's Quizzing Club

## RELEVANT COURSES

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### Core Courses

Linear Optimization  
Statistical Inference  
Stochastic Processes and Applications  
Analysis and Design of Algorithms  
Theory of Computation  
Abstract Algebra-I  
Real Analysis-I  
Data Structures & Algorithms  
Probability and Statistics

### Other Courses

Differential Equations  
Advanced Programming  
Database Management  
Introduction to Quantitative Biology  
Linear Algebra  
Machine Learning  
Computer Architecture and Operating System  
Introduction to Engineering Design