



Mohit Kumar

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B.Tech - Computer Science and Engineering

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EDUCATION

Degree/Certificate	Institute/Board	CGPA/Percentage	Year
B.Tech. Major	Indian Institute of Technology, Guwahati	8.65 (Current)	2021-2025(Exp.)
Senior Secondary	CBSE Board	95.6%	2021
Secondary	CBSE Board	97.2%	2019

EXPERIENCE

- MITACS Globalink Research Intern - Dalhousie University, Canada** May 2023 - Present
Research Intern under Prof. Ahmed-Al Mallahi Onsite, Nova Scotia, Canada
 - Developed a **Mask R-CNN** Architecture based algorithm developed by Facebook AI Research for segmenting tubers.
 - Wrote python script using **OpenCV** (CV2/ **Computer Vision**) library to get image by frame-grabber.
 - To prevent defects from occlusion and motion blur, a separate **Machine Learning** model was devised for sampling using **RandomForestClassifier()**. **Deep Learning** frameworks like **PyTorch** and **TensorFlow** were used for devising features like concavity and solidity and **95% mIoU**, **92% Recall** and **94% Precision** was observed by the model.
 - The system improved old algorithm from **12s to 900ms** and is used by **McCain's Farms of Future(FoF)**, Canada.

PROJECTS

- Car Price Estimator** Jun. 2023 - Jul. 2023
Self Project Github
 - Used **Random Forest Regressor** to predict the price of an old car and **RandomizedSearchCV** for Cross-Validation.
 - Successfully deployed the model using **Python app** and basic **HTML** and got **MAE of 0.88** and **MSE of 3.97**.
- Stock Predictor** Feb. 2023 - Mar. 2023
First Prize Winner in Inter Hostel Technical Competition Kriti Github
 - Made a model that used current stock values to predict future ones using **linear regression** and **stochastic LSTM**
 - Analysis was done using open, low, high of the current day's stock to predict the next day's close for 4 companies.
- Customer Propensity Modelling** Jun. 2023 - Jun. 2023
Self Project Github
 - Made a propensity model that attempts to predict the likelihood that visitor to a website will buy an item or not.
 - Used **Naive Bayes Classifier** for predicting today's propensity using yesterday's and features like button clicks.

ACHIEVEMENTS

- MITACS GRI**, Received the prestigious Fully Funded Research Internship in Canada in 2nd year only. 2023
- Kriti - Inter Hostel Tech Meet**, Received Gold Medal in the Stock Predictor High Prep Event. 2023
- Specialist**, Max Rating 1412 on Codeforces(username- dhillonmohit), Competitive Programming Platform 2023
- All India Rank 1206**, among 0.25 million candidates in JEE Advanced Exam for admission in IIT. 2022
- HDFC ECS Scholar**, Selected among the top 100 undergraduate students from India. 2023
- Shraman Foundation Scholar**, Selected among the top 10 undergraduate students from IIT. 2022

KEY COURSES TAKEN

- Computer Science**: Data Structures and Algorithms(Theory and Lab), Computer Architecture and Organization, Database Management Systems(Theory and Lab), Formal Languages and Theory of Computation
- Mathematics**: Discrete Maths, Probability & Random Processes, Linear Algebra, Calculus, Number Theory
- MOOC's**: Deep Learning Specialisation and Machine Learning Specialisation (by deeplearning.ai)

TECHNICAL SKILLS

- Programming**: C/C++, Python
- Operating Systems**: MacOS, Linux, Windows*
- Tools/Frameworks**: Git, PyTorch, Tensorflow*, OpenCV
- Web Technologies**: HTML, CSS*
- Database Management**: MySQL * Elementary proficiency

EXTRACURRICULARS AND POSITIONS OF RESPONSIBILITY

- National Chess Champion**, 4th position in India and 3rd position in Haryana State Chess Championship
- Finance and Analytics Quiz**, 1st position in Swaraj-75 Quiz organized by FEC IITG and CnA IITG.
- State Quizzes**, Won **State Rank 1** in GK Quiz, Science and Maths Quiz, and Road Safety Quiz
- Best Runner**, in Beat the Secretaries Event among undergraduates of IITG, run over 100km in a week.
- Scrum Master**, AIES Group MITACS, Led team of interns for 3 Scrum Meetings and gave 5+ presentations.
- Co-ordinator**, MMC Manas, IIT Guwahati