HIMANSHU CHAUHAN

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Indian Institute of Technology, (B.H.U), Varanasi (+91)7351452977
Junior Undergraduate in Mechanical Engineering with Specialization in Industrial Management

EDUCATION

Year	Degree	Institute	%/CPI
2016-2020	B.Tech in Mechanical Engineering	IIT BHU Varanasi	**8.93/10**
2014-2015	Intermediate	Translam Academy International	92.8

ACADEMIC ACHIEVEMENTS

Certifications	▪ Neural Networks and Deep Learning by deeplearning.ai	2018
Competitive Exams	▪ IITJEE: **AIR 4996** out of 4.7 lakhs students | JEE MAIN: AIR 10050 out of 10.5 lakhs students	2016

LANGUAGES

C++, PYTHON

TOOLS

Numpy, Git, TensorFlow, Keras, OpenCV

AREAS OF INTEREST

Computer Vision, Machine Learning

WORK EXPERIENCE

KPIT Technologies

- Part of the **Deep Learning Team, Autonomous Driver Assistance System**.
- Worked on defining a **new algorithm and loss function** for the **Multi-Label Object Detection.**
- **Hypothesis Generation** for increasing the accuracy of the model.
- Implemented the the algorithm on a raw dataset, **enhanced accuracy** and deployed it to the **video system**.

Exposure: TensorFlow, OpenCV, Concurrent Programming

KEY PROJECTS

Autonomous Robotic Arm for Warehouse Logistics
UnderGraduate Project under the guidance of Prof. Kripa Shankar

- Design and Fabrication of **6 degree of freedom** autonomous robotic arm to sort the objects based on shape and colour.
- Used Computer Vision principles for object localisation and detection through camera and determine the object location and color.
- Used Robotics principles for kinematic movements of links using servo motors.

Histopathological Image Classification using Deep Learning
under the guidance of Prof. S.K. Singh (August 2018-Ongoing)

- Studied Medical Image Computing techniques for Histopathological Images
- Used **Data Augmentation**, **Stain Normalization**, and **Stain Augmentation** techniques that improved the **accuracy by 7%**.
- Used layer features of pretrained **VGG16** and concatenated to classify the feature vector.
- Achieved best accuracy of **97.2%** and submitted the work to **Journal of Information Science, Elsevier.**

Restoring Old Images
(September 2018- Ongoing)

- Studying Image Inpainting Techniques using **Generative Adversarial Networks**.
- Improving state-of-the-art techniques to be applied on any type of images.

Exploratory Project
(August 2017- November 2017)

- Designed a model of **Light-Weight** innovative DUSTBIN under the guidance of Prof. AK Agarwal to be installed at public places.
- Served as a purpose of reducing spillage while picking the waste from it, this helped in reducing stink around the dustbin.
- Reduction of spillage by **20%** is observed at installed places.

EXTRA CURRICULAR ACTIVITIES

National Sustainability Case Challenge	▪ Achieved **Top 8** finals among **250 Teams** across India ▪ Diagnosed the problem of Global Warming and proposed some good solutions.	2018
River Rejuvenation Conclave	▪ Surveyed the prevailing conditions of pollution in Ganges River ▪ Won the event with **FIRST PRIZE** for innovative idea of **MANURE CENTERS**	2016