

**VISHAL KUMAR**| [vk310402@gmail.com](mailto:vk310402@gmail.com) | [LinkedIn Profile](#)

CIVIL ENGINEERING (B. Tech 2020-2024)

| [GitHub](#)

INDIAN INSTITUTE OF ENGINEERING SCIENCE AND TECHNOLOGY, SHIBPUR

**EDUCATION**

| Examination                                   | Year    | Institute    | CGPA / Marks(%) |
|---|---------|--------------|-----------------|
| B.TECH  | 2020-24 | IEST SHIBPUR | 8.13/10         |
| All India Senior Secondary School Examination | 2018-20 | CBSE         | 86.5 %          |

**SCHOLASTIC ACHIEVEMENTS**

- Secured 96.4 percentile in Joint Entrance Exam, Advance among 0.17 million candidates. [2020]
- Acquired **97.3 percentile** in Joint Entrance Exam, Mains among 0.93 million candidates [2020]

**INTERNSHIP****Image-based Crack Detection using Machine learning Approach** | ISM Dhanbad | Proof's. Piyali Sengupta [May 23 – July 23]

- Assigned task is to detect or contours the concrete cracks created by artificial equipment in a lab. Through Deep Learning concepts have to teach machine to make difference in crack surface images & uncrack surface images which comes under Binary Classification.
- Made the CNN model using **Transfer Learning** and get training acc of 0.98 & **validation acc** 0.95 which seems no overfitting issues.
- Customized some pretrained model that is **VGG16** , **RESNET** and to train the model dataset used from *Kaggle of Surface Crack Detection*.
- Formulated computer vision tools on the crack images like **Canny edge detection**, **Threshold(150)**, **Contour** to highlight on cracks. [Link](#)
- Operated the **OpenCv2**, **PIL** and **patchify** libraries to convert the large (3000x4000) sized image into small patches of size (225 x 225).

**KEYPROJECTS****Human Pose Identifiers using Pose Net**

[August 23`]

- Identified poses of one Human body at a time with total 12 joints with the help of **Pose Net** model contributed by google.
- Compiled on live server merged by processing language or its update version **Pj5.js** or **ml5.js** with the components of setup & draw

**Classification of Cats & Dogs Model** | *Self-Learning Project*

- Based on CNN's for classification of Cats and Dogs from big datasets which classify it by an image at validation accuracy of around 77%.
- Executed new techniques of Deep learning that is **Image Augmentation**, **Transfer Learning** using various pertained model like VGG16, RESNET, Creating models of 4 Convolutional layers and respective **MaxPooling layers**, **Normalizing** dataset.

**Sorting Visualization Website** | *self-Learning Project*

[ July 2022 – Sep 2022 ]

- Developed an interactive web application using JavaScript for visualization of different algorithms like **Insertion sort**, **Bubble sort**
- Deployed **CSS** for adding different animatic including hover effect, buttons, colour grading and visual effects for better visualization.
- Provided some features like sorting speed control factor with value slow medium fast and size range to enhance number of blocks. **[JS]**

**TECHNICAL SKILLS**

|                       |   |                            |
|-----------------------|---|----------------------------|
| Programming Languages | <ul style="list-style-type: none"><li>• Python (<b>Passed LinkedIn Batch</b>), C++, NumPy, Pandas, Seaborn, ML Algorithm, NLP, Deep Learning, TensorFlow.</li><li>• NodeJS, MongoDB, JavaScript, HTML – CSS</li></ul> | Accomplished by Self study |
| Software              | <ul style="list-style-type: none"><li>• Jupyter, AutoCAD, VS code, Git Hub.</li></ul>   |                            |

**COURSES & CERTIFICATES**

Databases and SQL for Data Science with Python IBM | Convolutional Neural Networks in TensorFlow Coursera |  
Introduction to TensorFlow for AI, ML and DL Coursera | Machine Learning with Python VERZEO

**POSITION OF RESPONSIBILITY****CHOREOGRAPHER | REFLEXOBETA CLUB** IEST SHIBPUR

[ July 2022 – Present ]

- Worked as volunteer and coordinated one the most active club in IEST SHIBPUR college fest, departmental activities, technical fest.
- Mentored more than hundred eager students in variety of dancing competitions and college-hosted events.
- Undertook more than ten dance sessions in every week.

**VOLUNTEER | ROBIN HOOD ARMY(RHA)** GAYA

[Oct 2020 – Oct 2021 ]

*The RHA is a zero fund volunteer organization that works to get surplus food from restaurants and the community to serve less fortunate people.*

- Audited for collecting food and leading the team to succeed drive in different spots. Ranked in the poster-making team by RHA GAYA.

**EXTRA CURRICULARS**

- Negotiated successfully on college annual fest **REBECCA** for group dancing with help of complete positive team ship by members. [23]
- Participated and bagged **rank 3<sup>rd</sup>** in **Group Dance Competition** held in IIT BHU Kashi Yatra Fest [2023]
- Solved **100+** problems in across different coding platform GFG, Leet-Code on topic include array, string , tree, stack, heap. [ 21– Present ]
- Amplified **highest typing Speed 70 Wpm** in different Typing Platform like **Monkey type**, Typing.com , Typing Test [ 2022]
- Led and mentored a team for SPL cricket tournament and scored highest among all other teams among all teams. [ 2022]