

Devagya Singh Vats

Third Year Undergraduate
Department of Civil Engineering

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📧 devagyasv22 | in Devagya Vats

ACADEMIC QUALIFICATIONS

| Year | Degree/Certificate | Institute | CPI/% |
|----------------|--------------------|---------------------------------------|---------|
| 2022 - Present | B. Tech. | Indian Institute of Technology Kanpur | 7.52/10 |
| 2022 | Class XII (CBSE) | School of Excellence , Rohini | 94.6% |
| 2020 | Class X (CBSE) | School of Excellence , Rohini | 90.8% |

SCHOLASTIC ACHIEVEMENTS

- Among the top **5%** in **Joint Entrance Exam Advance 2022** out of **1.5** lakh candidates conducted by IIT Bombay.
- Among the top **1.1%** in **Joint Entrance Exam Mains 2022** out of **10.5** lakh candidates conducted by NTA.

KEY PROJECTS

GUI for Defects Identification (*Winter Project*) (*Jan'24- April'24*)

Mentor : Prof. Anikesh Pal | Department of Mechanical Engineering

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| Objective | • To develop a GUI that can load the image run ML model on background to predict the type of defect. |
| Approach | • Collected the raw data from the ASM Handbook and multiple online sources and divided into 11 classes. • Successfully implemented the transfer model of Inception-v3 on a dataset, to get the test accuracy of 55% . • Created a GUI using the Tkinter library for loading an image and predicting crack type based on the model. |
| Outcome | • This GUI can able to load more that 100+ images at the image and predict cracks based on model accuracy. |

Introduction to Machine Learning 📧 (*Google Developer Student Club*) (*Dec'23-Jan'24*)

- Gained hands-on experience with data manipulation using **Numpy** and **Pandas**, and applied fundamental ML techniques.
- Developed practical skills in comprehensive data visualization and exploration using **Seaborn** and **Matplotlib** libraries.
- Successfully implemented a various **CNN** dense model to classify and detect cats and dogs, achieving a **48% F1 score**.

Spaceship Titanic Kaggle Project 📧 (*Self Project*)

- Analyzed passenger data using Python libraries such as **NumPy** and **Pandas** to a given training dataset of passenger.
- Applied machine learning algorithms like **Logistic Regression** and **RandomForestClassifier** to achieve a **80%** accuracy.
- Conducted **data preprocessing** and **data visualization** to enhance machine learning model performance and interpretability.

Vertical Air Quality Modeling Using UAV-Based Low-Cost Sensors & ML Techniques (*SOCE*) (*Dec'23-Jan'24*)

- Learned machine learning models, **Python libraries** and applied them to sample datasets to get hands-on experience.
- Leveraged multiple Machine Learning models on a real-time dataset of the **Air Pollution Index** to forecast outcomes.
- Applied various machine learning models, achieving an minimum **MSE** on **Linear Regression** on the test dataset.

POSITIONS OF RESPONSIBILITY

Manager | Society of Civil Engineers, IIT Kanpur (*May'24-Present*)

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| Leadership | • Leading a 3-tier team of 50+ members to organise events with collective budget of INR 3 Lakhs . • Planning and conducting the IIT Kanpur Civil Conclave - Sankalan with a budget of INR 6 Lakhs . • Helped Organising the Department Convocation for the graduating batch of 2020 with over 450+ attendees. |
| Initiatives | • Founding Member of Teams, SoCE of 20+ students to compete in Civil Competitions Nationally. • Conducted a memorable farewell for 200+ graduating civil engineering including both UGs and PGs students. • Successfully conducted Paper Presentation Competition in Sankalan'24(IIT Kanpur's inaugural Civil Engineering Conclave) and overseeing all the logistics and transportation of 20+ finalists on the campus. |
| Impact | • Achieved a 40% YoY growth in the number of people participating in various departmental activities. |

Head | Opportunity Open Source Conference'24, IIT Kanpur (*June'24-Present*)

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| Leadership | • First time Organizing Open Source conference and 12 hour offline Hackathon for a campus community. |
| Initiatives | • Designed the Marketing Brochure and Marketing Prospectus for invitation and marketing purposes. • Coordinated logistics for accommodation , and reached out to 100+ colleges to drive participation. |

Organizer, Design | Antaragni'23, IIT Kanpur (*June'24-Present*)

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| Leadership | • Led a team of 10+ Volunteers and collaborated with 20+ organizers to handling the design aspect of festival. |
| Initiatives | • Assisted the heads incorporating the Theme in the various events and branding elements in the festival. • Involved in designing of 30+ posters and various Banners and Hoardings displayed during the festival. |
| Impact | • Successfully increased Instagram reach by 20% through the creation and strategic posting of engaging content. |

Secretary | Chess Club, IIT Kanpur (*June'23-Mar'24*)

- Coordinated with coordinators to organize **10+** Chess tournaments, events, workshops and **GM** talks for campus community.
- Successfully organized **CMPL** participation from over **80+** colleges and managed sponsorship of **INR 7.5 Lakh**.

TECHNICAL SKILLS

- **Languages and Libraries:** C, C++, Python, HTML, JavaScript, Numpy, Pandas, Seaborn, Matplotlib, scikit-learn.
- **Softwares and Utilities:** Adobe Photoshop, AutoCAD, GitHub, Jupyter Notebook, TensorFlow, LaTeX.

EXTRA-CURRICULAR ACTIVITIES

- Successfully completed the **Google Cloud Study Jams** organized by the **GDSC** aquired skills in cloud computing.
- **Senior Security Officer (SSO), Techkriti 24:** Successfully managed security operations during the events of the fest.
- Secured International Rank **340** in the Science Olympiad Foundation's **International General Knowledge Olympiad** 2018.
- Participated in **Generative AI** Workshop organized by **GDSC** under **Proffessor Vipul Arora** and cleared **stage 1**.