Svastik Kanwar

UG Pre- Final Year | NIT Kurukshetra
Major: Computer Engineering

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ACADEMIC QUALIFICATIONS

Educational Qualification	Institute/Board	Year	CPI
B.Tech., Computer Engineering	NIT Kurukshetra	2021-25	**8.8**/10
Class XII (HPBOSE)	K-KEY Public School	2018-21	87.4%
Class X (CBSE)	DAV Public School	2014-17	94.5%

ACHIEVEMENTS

- NTSE (National Talent Search Exam) STAGE-1 Scholar 2018.
- Secured an **All-India Rank 5645**, Joint Entrance Examination Mains 2021 among over 1 million aspirants
- Secured an **All-India Rank 318**, Joint Entrance Examination B.Arch. 2021 among over 100 thousand aspirants
- Competitive Programming: **Pupil in Codeforces , Top 15% on leetcode (solved 1000 problems over both platforms)**
- **SIH 2023 Finalist**, developed a solution prototype for problem **"Change detection due to human interference" given** by **ISRO.**

WORK EXPERIENCE

- **Suraksha One Pvt. Ltd.** *May'23-July'23*
  Machine Learning and Android Development Internship | Algorithmic Quantitative Strategies
  - Developed a credit score prediction model that assessed creditworthiness based on customer data and clustering results.
  - Developed a mobile app on flutter framework, which is used to provide information to farmers across India regarding various agricultural activities.
  - Designed a database **schema (MySQL) to** efficiently store and retrieve agricultural data.
  - **Implemented RESTful API** endpoints to facilitate seamless communication between the mobile app and the server, ensuring real-time data synchronization.

KEY PROJECTS

- **Image Compression** *Feb'23-May'23*
  Clustering Algo |NIT Kurukshetra
  - The primary objective of this project was **to efficiently reduce the storage** space required for images while maintaining high visual quality.
  - To achieve this, I employed **the K-Means Clustering algorithm**, a widely used technique in machine learning and data science, to group together colors of near similar intensity within images.
- **Catalog cum shopping app** *Jun'23-Jul'23*
  Flutter |Dart | Node.Js
  - Implemented **sorting and searching algorithms.** Optimized it for a smooth experience.
  - I populated the app with real-time data and integrated **RESTful APIs,** enabling the app to fetch product information, prices, and availability from a remote server
- **Digit Recognition** *Mar'23-May'23*
  Neural Networks | Machine learning | NIT Kurukshetra
  - The project's core focus was **on training models** to accurately identify handwritten digits based on the MNIST database
  - By successfully training models to recognize handwritten digits, I gained valuable experience in **deep learning,** data preprocessing, model optimization, and evaluation.
- **Crop Disease Prediction(SIH 2023 Project)** *Sept'23-Sept'23*
  Machine learning| Flutter | Neural Network
  - Improves the previously built versions of the same app , by using CNN to enable single class identification on a single image with an **accuracy of 94%.**
  - Performed augmentation , random flipping , Fourier transform change to make training data set more variable ,enhancing the training of neural networks. Made an elaborative UI in flutter too alongside authentication
- **Landscape change detection (SIH 2023 Project 2)** *Oct'23-Nov'23*
  Machine learning| Flutter | Neural Network
  - Developed robust algorithms leveraging convolutional neural networks (CNNs to analyze satellite imagery and identify significant changes over time. Considered two use cases 1)Buildings 2)Deforestation
  - Performed augmentation , random flipping to make training data set more variable ,enhancing the training of neural networks.
  - This Project got selected for SIH 2023 Finals under ISRO(Indian Space Research Organization)
- **Machine Learning projects** *June'23-AUG 23*
  Machine learning| Data Mining
  - Made projects regarding linear regression, SoftMax regression, Decision tree, clustering, Outlier detection.
  - They not only enriched my understanding of data science but also equipped me with the skills needed to extract meaningful insights and predictions from complex datasets.

TECHNICAL SKILLS

- **Programming/Scripting Languages**: C , C++, Python, HTML, JavaScript, Dart, SQL

- **Tools/Software Packages used**: LaTeX, Android Studio, Node.js, MS Excel, git, Flutter, TensorFlow, Fire Base

RELEVANT COURSEWORK

UI/UX Design	Data Structure and Algorithm Data Mining Techniques Full Stack Web development	Machine Learning Specialization, (Coursera) Meta Android Development