

MD AKRAM KHAN

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Education

Indian Institute of Technology Mandi

B Tech in Engineering Physics, CGPA: 8.10

June 2023

Mandi, Himachal Pradesh

Bright Way Inter College

XII, 87.8%

April 2018

Lucknow, Uttar Pradesh

Deoria Senior Secondary School

X, CGPA: 8.8

April 2016

Deoria, Uttar Pradesh

Relevant Coursework

- Data Structures
- Algorithms Analysis
- Linear Algebra
- Data Handling
- Data Science I,II,III
- Database Management
- Engineering Mathematics
- MFoCS

Projects

Vaccine Slot Tracker | Python, Django, SQLite, JavaScript, HTML, CSS

- Created a Web application to alert users for Covid-19 vaccine slot availability.
- Integrated Cowin API with Django based back-end to create a mail-based notification system.
- Created Python Script to schedule the program to process all queries automatically at 11 AM every morning to check vaccine slot availability .

Sound Spark - An audio cleaning application | Python, Audio processing, Signal processing

- Designed 4 algorithms which applied improvised denoising techniques(spectral subtraction, frequency filtering and moving average filters) on input audio signals.
- Analysed the signal using visual representations in time and frequency domain and applied different window shapes and sizes to estimate the noise component.
- Tested the algorithms on 20 noisy YouTube videos and analysed the filtered signals to finally achieve nearly 80% cleaning of the signal.

IPL Score Predictor | Python, Django, JavaScript, HTML, CSS

- Created a Django based Web application to IPL predict score between any given numbers of overs.
- Processed past 13 years of IPL matches data using ML models to achieve an accuracy of 60%.
- Designed UI for the application and integrated the ML model with its back-end.

Course Project-MNIST Image Clustering | Python, SciPy, Sci-Kit Learn, Pandas, Matplotlib, Numpy

- Performed clustering on data-set of handwritten digits ranging from 0 to 9.
- Vectorized images to dimension of 784; reduced vectorized images to 2D vectors using t-SNE.
- Used various clustering techniques like KMeans, DBSCAN, GMM; achieved purity score of 0.7.

Technical Blogging Website | Python, Django, SQLite, TinyMCE, JavaScript, HTML, CSS

- Designed a dynamically updated blogging application which allows users to create posts, comment on posts sharing ideas and thoughts and receive newsletters.
- Integrated support for code formatting and markdown using TinyMCE text editor.

Technical Skills

Languages: C/C++, Python, HTML/CSS, JavaScript, SQL

Developer Tools: VS Code, Sublime Text, Jupyter Notebook.

Technologies/Frameworks: MySQL, Git, Django.

Achievements / Responsibility

- Won various intra-college competitions like Line Follower (robotics), CP101 (coding contest) etc.
- Cleared NTSE in 2016.
- Codeforces Challenge (Winter 2020): Rank 7 in competitive programming contest held at IIT Mandi.
- Volunteer at Rann-Neeti(Sports Fest) and Exodia(Tech Fest) .