

Aatif Ahmad

Roll No.:B22AI002
Artificial Intelligence and Data Science
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EDUCATION

Degree/Certificate	${\bf Institute/Board}$	CGPA/Percentage	Year
B.Tech. (AI)	Indian Institute of Technology, Jodhpur	8.55	2022-2026
Senior Secondary	CBSE Board	96.6.0%	2022
Secondary	CBSE Board	97.8%	2020

EXPERIENCE

• Summer Research in Unsupervised ML

May 2024 - June 2024

Dr. Shilpa Dang

- Performed unsupervised machine learning techniques, including K-means clustering, to parcellate regions of the human brain.
- Worked with fMRI data of 100 subjects (50 male and 50 female) to analyze and identify patterns in brain activity.
- Collaborated with a team to preprocess and analyze large datasets, ensuring data integrity and accuracy.

PROJECTS

• Employee Data Management Portal

June 2024

Developed a secure portal for employees to access and manage assigned data from spreadsheets.

Github | Vercel

- Created intuitive user interfaces for data viewing and editing.
- Ensured data security and compliance with proper authentication.
- Tools & technologies used: SheetDB, React, Redux, Tailwind CSS

• Stanford Twitter Data: Network Analysis and Community Structures

April 2024

Graphical visualization and analysis of Twitter exchange among US Congress members.

Github

- Implemented algorithms for finding shortest paths, centrality measures and community detection.
- Developed interactive visualizations to present findings effectively.
- Tools & technologies used: Python, Modules: Networkx, Matplotlib, Python-louvain

• Qubic : Real-Time quiz and chat application

April 2024

 $Developed\ a\ quiz\ and\ chat\ application\ using\ socket\ programming\ for\ secure\ client-server\ connections.$

Github

- Gained an understanding of the client-server model and implemented sockets for communication.
- Potential to extend the project for organizing polls, enabling group messaging, and other interactive activities.
- Tools & technologies used: Python, Modules: Tkinter, Socket

Image Retrieval and Classification using Machine Learning

Feb. 2024 - March 2024

Github | Vercel

- Worked in a team of 5 to apply various ML algorithms for achieving optimal accuracy.
- Developed a website using Next Js to test the model with random images.

Implemented ML models to classify and retrieve images from the CIFAR-10 dataset.

- Tools & technologies used: Supervised and Unsupervised ML Algorithms, Next Js

KEY COURSES TAKEN

• Data Structures and Algorithms, Pattern Recognition and Machine Learning, Maths for Computing, Principles of Computer Systems, Quantum Computing, Linear Algebra, Probability, Statistics and Stochastic Processes

TECHNICAL SKILLS

- **Programming:** C/C++, Python, JavaScript
- Tools & OS: Git, Jupyter Notebook, Google Colab, Docker, Linux, Windows
- Libraries/Modules (Python): Pandas, Numpy, Scikit-learn, Matplotlib, Seaborn, NetworkX
- Web Skills: MERN Stack: HTML, CSS, JavaScript, React, Node, Express, MongoDB, Tailwind

ACTIVITIES AND CERTIFICATIONS

- Competitive Programming: Active participant on CodeChef (with a rating of 1572) and LeetCode
- Open Source: Active on Github, earned multiple badges in Hacktoberfest 2023
- Full Stack Development : Certified in Full Stack Development by Simplilearn