Adarsh Jha

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Education

Indraprastha Institute of Information Technology, Delhi — CGPA: 7.7/10
B.Tech (Computer Science and Artificial Intelligence)
2022 - present

Kendriya Vidyalaya Pitampura, Delhi — Percentage: 92%
CBSE, Standard 12, PCM + CS(Elective)
2021 - 2022

Kendriya Vidyalaya Pitampura, Delhi — Percentage: 89%
CBSE, Standard 10
2019 - 2020

Skills

Expertise Area:	Machine Learning, Data Structures and Algorithm, Database Management Systems (SQL), Object Oriented Programming, Operating System, Prompt Engineering, Frontend Dev, Competitive Programming, Linux, Prompt Engineering
Programming Languages:	Python, Java, C++, JavaFX, MySQL, Javascript, MATLAB, ROS, Swi-Prolog
Tools and Technologies:	Git/GitHub, Linux, Matplotlib, Numpy, OpenCV, Figma, IntelliJ, PyCharm, IntelliJ, MySQL workbench, VM VirtualBox, Vim/Neovim, Kaggle, Scene Builder, CNN
Technical Electives:	Statistical Machine Learning, Data Structures and Algorithms , Operating Systems(C), Object Oriented Programmings, Convex Optimization, Algorithm Design and Analysis, Database Management System (MySQL), Signals and System, Probability and Statistics, Multivariate Calculus, Differential equations, Discrete Mathematics, Linear Algebra

Artificial Intelligence Projects

Handwritten Text Recognition — ***Mar 24' - May 24'***
Python, Tensorflow, Keras, Numpy, Pandas, OpenCV, CNN, LSTM — Colab

- Developed a CNN-LSTM hybrid model for handwritten text recognition using the IAM Handwriting Database, achieving a character-level accuracy of 95%.
- Implemented extensive preprocessing steps, including image resizing, normalization, and data augmentation to enhance model training.
- Utilized Connectionist Temporal Classification (CTC) loss for aligning predicted sequences with variable-length ground truth labels.
- Incorporated a feature to correct misrecognized words by checking against a dictionary and suggesting the closest word based on edit distance, improving efficiency by approximately 5%.

Sentiment Analysis on Social Media — ***May 24' - Jun 24'***
Python, Sklearn, NLTK, Pandas, Matplotlib — GitHub

- Developed a machine learning model for sentiment analysis on social media data using the Sentiment140 dataset, achieving an accuracy of 85% in classifying tweets as positive or negative.
- Implemented text preprocessing techniques such as lowercasing, URL removal, and lemmatization to prepare the data for model training.
- Utilized TF-IDF vectorization for feature extraction and trained multiple classifiers including Logistic Regression, Bernoulli Naive Bayes, and LinearSVC.
- Evaluated models using classification metrics and confusion matrices, and serialized the best-performing model for future predictions.

Development Projects

Mini Operating System ***July 23' – Aug 23'***
C, Linux GitHub

- Designed and implemented a custom shell in C for Linux, providing basic command execution capabilities.
- Integrated features like command history, auto-completion, and signal handling to enhance user experience.
- Demonstrated deep understanding of process management, file handling, and inter-process communication in Linux.

Online Database Management System (Team Size - 4) ***Jan 24' – May 24'***
Python, JavaScript, HTML, CSS, SQL GitHub

- Developed an E-Commerce website allowing customers to shop and administrators to manage products.
- Designed and managed the database model, ensuring efficient storage and retrieval using SQL.
- Built a responsive e-commerce platform for Myntra clothing with a user-friendly interface and design.
- Implemented key features such as user registration, login, shopping cart management, and order history tracking.
- Managed conflicts and conflicting transactions to ensure data integrity and user satisfaction.

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Stick Hero Game (Team Size - 2) ***Oct 23' – Dec 23'***
Java, JavaFX, Scene Builder, Design Patterns, JUnit GitHub

- Developed a dynamic JavaFX game with score/gem display, pause, and end game functionality, achieving a 95% satisfaction rate among testers.
- Implemented smooth animation transitions and custom UI elements, increasing player retention by 20%.
- Utilized Singleton and Factory design patterns for efficient code management and scalability.
- Conducted comprehensive JUnit tests, ensuring a reliable and high-quality application.

Awards and Achievements

- **JEE Mains 2022** ***AIR 4778***
  Secured All India Rank 4778 in JEE Mains with a 99.5 percentile score among 872,970 students and qualified for JEE Advanced 2022.
- **Scholar of the Year Award from KVPP (2021 & 2022)**
  Received the prestigious Scholar of the Year award from Kendriya Vidyalaya Pitampura for outstanding academic achievements and contributions for both 2021 and 2022.
- **Indian National Physics Olympiad (INPhO)** ***High Distinction (Top 5%)***
  Qualified the National Standard Examination in Physics (NSEP) and ranked in the top 5% in the INPhO.
- **CHESS** ***Legends League***
  Achieved the title of Legend in chess.com for exceptional performance in online chess tournaments.

Positions of Responsibility

- Member of the Operations Team at Odyssey IIIT-D. (Oct, 23 - Jan, 24)
- Class Representative, Grade 12. (Jun, 21 - Apr, 22)

Interests and Hobbies

- I like to participate in competitive programming to sharpen my problem-solving and coding skills continuously.
- I like to play Chess and participate in tournaments
- Like to play Foosball

Declaration: The above information is correct to the best of my knowledge.
Adarsh Jha
Date: July 26, 2024