# Adarsh Jha

Roll no. 2022024 | ✉ adarsh22024@iiitd.ac.in
DOB: 21 March, 2005
+91 7042582600 | ⊙ Github | in LinkedIn

## 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.

=

**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 24, 2024