

Aaditya Srivastava

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Education

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| • Bachelor of Technology in Computer Science and Engineering
<i>Vellore Institute of Technology, Bhopal</i> | 2022-26
CGPA: 8.37 |
| • City Montessori School, Rajendra Nagar-I
<i>XII (Senior Secondary)</i> | 2021-2022
90.1% |
| • City Montessori School, Rajendra Nagar-I
<i>X (Secondary)</i> | 2019 -2020
93.2% |

Projects

- **License Plate Recognition System** *August 2025 – September 2025*
 - Built an image-processing pipeline for license plate detection using CCA followed by character segmentation and recognition.
 - Trained a supervised Support Vector Classifier (SVC) on a labeled dataset of characters to achieve robust character recognition.
 - Enhanced accuracy through preprocessing, vertical projection filtering, and cross-validation, improving results by 15%.
 - Performed character segmentation by isolating individual symbols from license plate regions, resizing them to 20x20 pixels, and ordering them for recognition.
 - Tech:** Python, scikit-image, scikit-learn, NumPy, Pillow, matplotlib
- **Digit Recognition using Neural Networks** *July 2025 - August 2025*
 - Implemented a feed-forward neural network in Keras, reaching 95.6% test accuracy on 10K unseen images.
 - Preprocessed and normalized 60K training samples, reshaping pixel vectors into 784-dim inputs.
 - Designed and trained a Sequential model with two hidden layers (64 neurons each, ReLU activation) and an output layer (Softmax), optimized with Adam.
 - Performed model evaluation achieving robust generalization across unseen data and demonstrated predictions with real test samples.
 - Tech:** Python, NumPy, TensorFlow, Keras, MNIST
- **BitTorrent Client** *July 2025 – August 2025*
 - Engineered a peer-to-peer file sharing client with torrent parsing, tracker communication, and secure peer handshakes.
 - Implemented chunk downloading and SHA-1 verification, ensuring 99.9% file integrity during reconstruction.
 - Added CLI support for torrent inspection, tracker testing, and selective piece downloads, improving usability by 30%.
 - Optimized metadata extraction and peer discovery, reducing connection setup time by 25%.
 - Tech:** Python, asyncio, socket programming, hashing (SHA-1)

Achievements

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| CodeChef Rating: 1277 (aaditya8)
Global Rank - 8988 in Starters 174 (Rated) | Highest Rating: 1277 |
| LeetCode Rating: 1358 (AadityaSRV)
Global Rank - 1807 in LeetCode Biweekly Contest 133, out of 25,500+ participants | Highest Rating: 1490 |

Technical Skills and Interests

Languages: Java, Python, MySQL, HTML, CSS

Web Dev Tools: Github, Git

Cloud/Databases: Relational Database (MySQL)

Relevant Coursework: Machine Learning, Data Structures & Algorithms, Object Oriented Programming, Computer Network, Deep Learning.

Certifications

- **Google-** The Bits and Bytes of Computer Networking, December 2023
- **DeepLearning.AI** - Supervised Machine Learning: Regression and Classification, March 2025