Aaditya Srivastava

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Education

•Bachelor of Technology in Computer Science and Engineering *2022-26*
Vellore Institute of Technology, Bhopal CGPA: 8.37

•City Montessori School, Rajendra Nagar-I *2021-2022*
XII (Senior Secondary) 90.1%

•City Montessori School, Rajendra Nagar-I *2019-2020*
X (Secondary) 93.2%

Projects

•LLM Tokenizer *September 2025 - Present*

- Developed a tokenizer from scratch to efficiently convert raw text into subword token sequences for downstream NLP tasks.
- Implemented subword tokenization algorithms such as Byte Pair Encoding (BPE) , optimized for vocabulary coverage and reduced out-of-vocabulary rate.
- Integrated text normalization, token frequency analysis, and vocabulary generation pipelines to ensure balanced token distribution.
- Evaluated tokenizer performance on diverse corpora, improving encoding efficiency .
- Technologies Used: Python, NumPy, regex, tokenization algorithms (BPE)

•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 20×20 pixels, and ordering them for recognition
- Technologies Used: 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
- Technologies Used: Python, NumPy, TensorFlow, Keras, MNIST

Achievements

CodeChef Rating: 1277 (aaditya8) **Highest Rating:** 1277
Global Rank - 8988 in Starters 174 (Rated)

LeetCode Rating: 1358 (AadityaSRV) **Highest Rating:** 1490
Global Rank - 1807 in LeetCode Biweekly Contest 133, out of 25,500+ participants

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, LLM

Certifications

•DeepLearning.AI - Supervised Machine Learning: Regression and Classification *March 2025*