Neeraj Kumar

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Skills

Languages: C, C++, Java, Python
Technologies/Frameworks: TensorFlow, Scikit-Learn, NumPy, Pandas, Matplotlib, OpenCV, Git, GitHub.
Soft Skills: Quick Learner, Critical Thinking, Problem Solver, Adaptability, Team Collaboration.

Training

GeeksforGeeks – Complete Interview Preparation May 2024 – Aug 2024

- Demonstrated strong grasp of arrays, linked lists, trees, and graphs through structured complexity analysis and implementation.
- Solved algorithmic problems using dynamic programming, greedy methods, recursion, and efficient backtracking techniques
- Developed clean, high-performance code by effectively applying techniques such as debugging, profiling, multi-threading, caching, indexing, and optimization to enhance software efficiency, scalability, reliability, and overall system performance.
- Continuous Learning & Adaptability: Continuously upskilling through problem-solving and staying updated with new technologies.

Projects

Multi Class Text Classification System | Python, scikit-learn, Word2Vec, Ensemble Learning Aug 2024 – Dec 2024

- Improved text classification system with BBC News dataset, achieving 12% gain in prediction accuracy and efficiency.
- Designed and implemented Naïve Bayes, SVM, Random Forest, **HMM (Word2Vec)**, and an **Ensemble Voting Classifier** model.
- Evaluated models using Precision, Recall, F1-score, and Accuracy, leading to a 20% increase in overall model effectiveness.
- **Attained 97% classification accuracy** using **TF-IDF** feature extraction, improving model performance by 18% over baseline.

Vicon Physical Action Dataset | Python, NumPy, Pandas, scikit-learn, Matplotlib, Seaborn Jan 2024 – May 2024

- Engineered and developed an action classification system using the Vicon dataset, improving performance accuracy by 15%.
- Applied data preprocessing techniques like **merging**, **encoding**, and **scaling** to enhance the model's performance effectively.
- Trained and optimized Logistic Regression, **Random Forest**, SVM, and Decision Tree models to improve performance.
- Achieved an impressive **99.99% accuracy** by effectively utilizing the Random Forest model for classification tasks.

Music Recommendation System Jan 2024 – May 2024

- Crafted an intelligent recommendation system to deliver personalized song suggestions based on user preferences and behaviour.
- Leveraged **cosine similarity** to significantly improve recommendation accuracy by calculating the similarity between user preferences and songs, ensuring more personalized, relevant, and accurate song recommendations aligned with listener interests.
- Accomplished an **accuracy of 85.00%** by implementing effective models and optimizing them for enhanced performance.

Certificates

NPTEL

- Technical English for Engineers (Elite + Silver) Aug 2024 – Oct 2024
- Introduction to Internet of Things (Elite + Silver) Jul 2024 – Oct 2024
- Introduction to Machine Learning (Top 5%) Jul 2024 – Oct 2024
- Probability and Statistics Jan 2024 – Apr 2024

Achievements

- Ranked in the top 5% in the NPTEL Machine Learning Course. Jul 2024 – Oct 2024
- eYantra Robotics Hackathon: Qualified Stage 1, securing national rank 82 out of 1000 teams, demonstrating expertise in robotics, engineering design, and problem-solving Jul 2024 – Dec 2024

Education

Lovely Professional University 2022 – 2026
Computer Science and Engineering, CGPA: 7.95 Phagwara, Punjab

R. S. S. Science College 2019 – 2020
12th with Science, Percentage: 75.60% Sitamarhi, Bihar