

Nipun Sharma

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EDUCATION

VIT Bhopal University

Bachelor of Technology in Computer Science and Engineering – CGPA: 8.73

Bhopal, MP

Nov 2022 – Present

TECHNICAL SKILLS

Python, C++, SQL, Solidity, HTML/CSS, JavaScript, Scikit-learn, Pandas, NumPy, TensorFlow, Firebase, Jupyter Notebook, Git, GitHub, Hugging Face, LLMs, Few-shot and zero-shot inference, Prompt engineering

WORK EXPERIENCE

Software Developer | ET Ideas

June 2024 - May 2025

- Integrated AI-assisted Firebase infrastructure to optimize client-side performance, achieving 30% faster application load times compared to baseline metrics and significantly enhancing user experience.
- Researched and prototyped LLM integration into customer workflow systems, reducing query resolution time by 25% and improving customer satisfaction scores.
- Developed and scaled an AI-assisted Flutter prototype, contributing to 10% revenue growth for the organization.

AI Research Intern | K K Tech

March 2023 - April 2024

- Developed a neural network from scratch using core mathematical foundations, demonstrating comprehensive theoretical understanding of deep learning principles.
- Conducted comparative analysis of classification models (Logistic Regression, Decision Trees, Random Forest, SVM, k-NN) with PCA, cross-validation, and confusion matrix analysis.
- Spearheaded LLM fine-tuning initiatives using advanced prompt engineering techniques, reducing compute costs by 20% and improving predictive accuracy by 25%.

PROJECTS

Music Generation using Gen-Ai | Python, Hugging Face Transformers, PyTorch, Jupyter Notebooks

Apr 2025

- Successfully fine-tuned a pre-trained generative transformer using few shot inferences to create mood-aligned music clips.
- Designed and applied classification rules for genre labeling systems, enhancing model output quality by 20%.
- Yielded >85% positive user-satisfaction rating in blind listening tests across 50 college participants.
- Packaged demo in an interactive Jupyter notebook for real-time prompt-to-audio generation.

Neural Network From Scratch | Python, NumPy, Jupyter Notebooks

May 2025

- Built forward propagation, backpropagation, SGD, and cross-entropy loss *entirely in NumPy* without high-level ML libraries.
- Secured 85% validation accuracy on the *MNIST* dataset with a 3-layer fully connected architecture.
- Modularized codebase (layers, activations, optimizers) for extensibility and educational reuse.
- Produced detailed notebook visualizations of weight updates and loss convergence for pedagogical clarity.

Comprehensive Analysis of Classification Algorithms | Python, Scikit-learn, Pandas, Matplotlib

July 2025

- Implemented and compared 7 classification algorithms (Logistic Regression, k-NN, SVM Linear/RBF, Decision Tree, Random Forest, Naive Bayes) on UCI wine dataset.
- Executed comprehensive data preprocessing, visualization, and feature analysis on 11 physicochemical properties to accurately predict wine quality ratings.
- Achieved 91.25% test accuracy with Random Forest classifier; evaluated performance using confusion matrices, cross-validation, precision, recall, and F1-score metrics.

CERTIFICATIONS

Generative AI with Large Language Models – DeepLearning.AI

Aug 2025

EXTRA-CURRICULAR

Tech Lead, Rajasthan Club - Orchestrated technical workshops and hackathons, leading a 15-member team, successfully attracting over 500 participants and establishing the club's technical reputation.

Runner-up in IDEATHON '22 - Recognized among top AI/ML innovations at VIT Bhopal for developing a novel solution to help students effectively navigate their academic workload.