

Shabnam Banu

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About Me

A motivated engineering student with a strong foundation in programming, data analysis, and problem-solving. Experienced in Python, Machine Learning basics, and Exploratory Data Analysis, with hands-on projects involving data pre-processing, model building, and evaluation. Known for being detail-oriented, consistent, and eager to learn new technologies.

Education

B.Tech in CSE with AI and ML Specialization

August 2023 – 2027

Sridevi Women's Engineering College

- **GPA: 8.24/10.0**
- **Coursework:** Database Management Systems, Computer Networks, Natural Language Processing

Projects

Image Captioning System

[SmartImageCaptioning](#) 

- Developed an end-to-end image captioning model that generates human-like descriptions from images using an encoder-decoder architecture.
- Implemented ResNet-50 CNN for feature extraction and LSTM RNN for text generation using PyTorch.
- Trained on MS COCO dataset (82K+ images) and optimized sequence generation using teacher forcing and greedy decoding.
- **Tech Stack: Python, PyTorch, ResNet-50, LSTM, OpenCV, MS COCO Dataset**

Convolutional Neural Network Built from Scratch

[NeuralNetwork](#) 

- Designed and implemented a complete CNN training pipeline in pure Python without PyTorch, TensorFlow, or NumPy.
- Implemented core components from first principles: convolution layers, activation functions (Sigmoid, Softmax), loss computation, and manual backpropagation.
- Built an SGD-based optimizer to train the network on image data.
- **Tech Stack: Python, Custom Math Implementations, SGD Optimization**

College Placement Prediction

[College-Placement_ml](#) 

- Built a predictive model to determine student placement outcomes based on academic and experiential factors.
- Performed data preprocessing, feature engineering, and implemented Logistic Regression using Scikit-learn.
- **Tech Stack: Python, Pandas, NumPy, Scikit-learn, Matplotlib, Seaborn**

Skills

Programming Languages: Python, C, Java, SQL, Flutter, CSS

Tools and Technologies: Git, GitHub, Excel, Pandas, NumPy, Scikit-Learn, OpenCV

Data Visualization: Matplotlib, Power BI, Seaborn

Competencies: Problem Solving, Web Design, Data Structures and Algorithms, DBMS

Soft Skills: Adaptability & Flexibility, Attention to detail, Self-awareness, Empathy, Decision-making

Activities and Achievements

Volunteer for Street Cause - 2023

Volunteer for Freshers - 2024

Token of Appreciation for Active Participation in 3 day Workshop with NEXTERA UNITECH

Member of NSS Club since 2025

Certifications

Fundamentals of Data Analytics (infosys Springboard)

Database and SQL (infosys Springboard)

Languages

English *C2*

Urdu

Hindi

Telugu