Sobaina Sheikh

BS–CS

CONTACT

Phone: 03238903204
Email: sobainashiekh@gmail.com

<u>My_LinkedIn</u> link

EDUCATION

LUMS (2023–2027)

BS CS

Relevant Courses taken so far :
- Introduction to Machine Learning & Artificial Intelligence (CS 382)
- Data Structures and Algorithms (CS 202)
- Object–Oriented Programming (CS 200)

PUNJAB GROUP OF COLLEGES (2021–2023)

F.sc Pre Engineering

PROJECTS:

1–Movies Database Management System
Object-Oriented Programming, C++
- Designed and implemented a console-based CRUD system for managing a movies database using OOP principles.
- Applied encapsulation, inheritance, and polymorphism to structure maintainable and reusable code.
- Handled file I/O for persistent storage of movie records.

3–Random Trees Classifier in Python
Python, Decision Trees, Scikit-learn (for testing)
- Developed an ensemble model using multiple randomized decision trees to improve classification accuracy.
- Compared performance with standard decision trees on benchmark datasets.
- Explored bias-variance trade-offs and parameter tuning.

2–SVM Classifier from Scratch
Python, NumPy, Scikit-learn (for benchmarking)
- Implemented a binary Support Vector Machine classifier from scratch without using ML libraries for training.
- Applied the classifier on synthetic and real datasets, achieving comparable accuracy to Scikit-learn's SVM.
- Gained deep understanding of vector calculus and optimization techniques.

4–Peer-to-Peer File Sharing System using Distributed Hash Table (DHT)
Python, Sockets, Threading, DHT, Networking
- Implemented a decentralized file sharing system based on the Chord protocol with fault-tolerant DHT.
- Enabled node discovery, file insertion/lookup, and replication across a dynamic network of peers.
- Managed concurrent client connections using multithreading and socket programming.

LEADERSHIP EXPERIENCE

LUMS Women in Computing Society | Sep 2023 – May 2024

Social Media Manager

- Managed official social media accounts to promote events and initiatives.
- Developed and executed content strategies across social platforms (e.g., Instagram, Facebook) to boost event awareness and student participation. Leveraged analytics tools to track engagement metrics (likes, shares, comments) and refined messaging for maximum impact.
- Collaborated with event organizers and design teams to create cohesive promotional materials, aligning campaigns with user interests and society goals

LUMS Religious Society | Sep 2024 – May 2025

Outreach Director

- Led outreach initiatives to engage students and promote society events.
- Coordinated with multiple departments and student groups for collaborations.
- Organized and facilitated events that fostered community involvement.
- Collected participant feedback after events and applied insights to improve future event planning and user experience

TECHNICAL SKILLS LEARNED FROM PROJECTS:

- Programming Languages: C++, Python
- Machine Learning Concepts i have learned so far :
- Supervised Learning (Linear/Logistic Regression, SVMs, Decision Trees, Naïve Bayes)
- Neural Networks and Deep Learning (MLPs, CNNs, activation functions, gradient descent)
- Model Evaluation (Cross-validation, Bias-Variance Tradeoff, Regularization Techniques)
- Basics of Unsupervised Learning (Clustering, PCA)