Manahil Mushtaq

📞 +92-313-7704026   ✉ manahilmushtaq004@gmail.com   in linkedin.com/manahilmushtaq

Education

Namal University   Expected May 2025
Bachelor of Science in Computer Science (GPA: 3.88 / 4.00)   *Mianwali, Pakistan*
- **Relevant Coursework:** Data Structures, Analysis of Algorithms, Artificial Intelligence (AI), Software Engineering, Prob & Stat, Linear Algebra, Computer Networks, Theory of Automata, Operating Systems

Experience

Arbisoft   Nov 2023
Campus Ambassador   *Lahore, Pakistan*
- Executed marketing campaigns to increase brand awareness and engagement among students.
- Facilitated communication between Arbisoft and university staff to organize events and workshops.
- Developed creative strategies to promote Arbisoft's products and services on campus.

Namal University   Oct 2023 – Jan 2024
Teaching Assistant (TA) | Data Structures   *Mianwali, Pakistan*
- Collaborated with the course instructor to design and deliver instructional materials for the Data Structures course.
- Evaluated student performance through the grading of assignments, quizzes, and exams, maintaining fairness and consistency in assessment practices.

Namal University   Oct 2023 – Jan 2024
Teaching Assistant (TA) | Database Systems   *Mianwali, Pakistan*
- Assisted the instructor in conducting lectures, workshops, and lab sessions for undergraduate students enrolled in the Database course.
- Provided guidance and support to students during office hours, helping them understand course materials, solve problems, and prepare for exams.
- Graded assignments, quizzes, and exams, providing constructive feedback to students to help them improve their understanding and performance.

Projects

JPEG Image Compressor | *NumPy, Pillow, OpenCV, Pandas, Matplotlib, Tkinter*
- Implemented an image compression algorithm to reduce the file size of JPEG images while preserving image quality.
- Utilized techniques such as discrete cosine transform and Huffman coding to achieve efficient compression ratios.
- Demonstrated proficiency in image processing and algorithm design.

Multimodal Network Anomaly Detection System | *TensorFlow, Scikit-learn, Matplotlib, Pandas*
- Designed and implemented a system for detecting anomalies in multimodal data streams, including system logs and network packets.
- Employed machine learning techniques such as classifier algorithms and neural networks to identify unusual patterns.
- Contributed to research on new anomaly detection techniques.

Facebook Clone (in Python) | *Python,tkinter*
- Developed a Facebook clone application with a graphical user interface using tkinter.
- Integrated multimedia features such as photo and video uploads, enabling users to share rich content with their network.
- Devised features such as user authentication, posting updates, commenting, and liking posts.

Technical Skills

Programming Languages: Python, C++
Tools & Technologies: TensorFlow, Scikit-learn, PyTorch, Git, MySQL, Pandas, Tkinter, HTML, CSS
Concepts: Operating Systems, Virtual Memory, Cache Memory, OOP, Encryption, Decryption, Artificial Intelligence, Machine Learning, Neural Networks, API, Agile Methodology, Database Normalization