Muhammad Saad Shafiq

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EDUCATION

- **National University of Computer and Emerging Sciences** — Lahore, Pakistan
  Bachelor of Science in Computer Science — *Aug. 2019 – June 2023*
  - **Courses**: Web Programming, Mobile Development, Software Testing, Artificial Intelligence, Game Design and Development, Web Scraping, Linux, Natural Language Processing, Advance Database Concepts, Digital Image Processing
  - **Activities**: FYP Exhibition in Job Fair 23, Software Project Competition(SPC) in Softec23

EXPERIENCE

- **Research Assistant - FAST-NUCES** — Lahore, PK
  Research Intern, Dr. Ali Afzal — *June 2022 - July 2023*
  - **Emergency Expert — FYP**: Developed "Emergency Expert," a comprehensive healthcare tool. The project included a mobile app developed with Android Studio using Java and a web app built with React. Implemented diagnostics, optimal hospital suggestions, bed and token management, integrated pharmacy services, and doctor appointments for holistic healthcare solutions.

- **Flutter/Android Development** — Freelance/FYP

  - **Details**: Specialized in highly custom design and backend implementation with APIs for mobile apps using Flutter and Android. Employed common Architecture Styles like MVC, MVP, and MVVM. Created visually appealing and user-friendly interfaces. Implemented robust backend functionalities for seamless app performance.

- **Web Scraping and Automation Development** — Freelance

  - **Details**: Excelled in web scraping and automation development with a focus on bypassing security measures for scrappers. Successfully completed large industry projects involving competitor analysis, price monitoring, and extensive data collection. Utilized Python, requests, Selenium, BeautifulSoup4, and more to develop custom automation scripts for data extraction, analysis, and visualization.

PROJECTS

- **Airline Ticket Booking System**: Developed an ASP.NET web application allowing users to purchase tickets online. Implemented in HTML, CSS, JavaScript, C#, and MySQL. The system provided a user-friendly interface for booking, cancellations, and viewing flight details.
- **FAST Chat App**: Created a Java-based Android app facilitating communication between students and teachers. Implemented features for Q&A sessions, announcements, and resource sharing, enhancing communication within the academic community.
- **Token System App**: Designed a Flutter-based app for managing waiting times at various platforms for tasks. The app offered online token registration and activity reports for owners, streamlining processes in busy environments.
- **Inventory Chat Bot**: Utilized N.L.P. techniques to develop a chat bot for inventory management. The bot facilitated tasks such as product search, order status updates, and restocking notifications. Implemented in Python using NLTK, T5 encoder-decoder model, and other libraries.
- **Lossless Image Compression and Decompression**: Implemented image compression and decompression algorithms using RLC, Huffman, DCT, ZigZag, and custom-Tkinter in Python. Achieved solid GUI support with a compression ratio of up to 5:1. The tool provided a user-friendly interface for image compression and decompression tasks.
- **Pixel Adventure Game**: Developed a Unity-based platform game incorporating puzzle-solving elements. The game featured engaging levels, interactive environments, and challenging enemies, providing an immersive gaming experience.

PROGRAMMING SKILLS

- **Languages**: Python, C, C++, C-Sharp, Java, Kotlin, Dart, MySQL, JavaScript
- **Technologies**: Unity, Android Studio, Flutter, Tensorflow, Matplotlib, TKinter, Pandas, NumPy, Selenium, Night-Watch, BeautifulSoup4, Flask, Docker, GCP, BigData, HTML, CSS, MongoDB, and SQL