Mubashir Iqbal

AI | ML Ops| Interpretable AI | System Engineer | Software Engineer | Web Developer

Why **Mubashir?**

Highly motivated and results-oriented software engineer with 6 years of experience, including 1 year as a team lead. Leveraging strong technical skills in AI, ML, DL, data science, NLP, and software development, I excel at driving projects from inception to completion while fostering strong team collaboration. Proven ability to manage timelines, budgets, and resources effectively, ensuring quality deliverables that meet user requirements and business objectives. Possess excellent problem-solving, analytical thinking, lifelong learning, communication, and leadership skills, building bonds with stakeholders and motivating teams to achieve their full potential.

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PROJECTS

ARTIFICIAL INTELLIGENCE, ML, DL, XAI

- ✓ Cloud Platforms & Environments like Google Colab, Hugging Face, Kaggle
- ✓ Data Preprocessing, Data Analysis, Data Augmentation, Data Visualization
- ✓ Machine Learning Expertise (RF, DT, SVM, LR, XGBoost, LightXBM, CatBoost, etc)
- ✓ Deep Learning Mastery
- ✓ Model Evaluation and Visualization
- ✓ Interpretability and Explainability of Model
- ✓ Deployment using the Django web framework

- *Heart Disease Prediction using MLP on NHANES dataset, Feature ranking using SHAP* — 11-2023 / 01-2024
- *Web-based image pre-processing and predicting dog or cat in the image* — 02-2023 / 03-2023

SOFTWARE PROJECTS

Embedded Systems & Hardware:

- ✓ Cross-compilation & Deployment: Seamless remote setup of devices
- ✓ Hardware Expertise: Experience with FPGA kits, embedded Linux, microcontrollers, etc.
- ✓ GUI Development: Building interactive interfaces with windows, stacking, and pop-ups

Software Development:

- ✓ Real-time Control: Efficient handling of time-critical events, timers, and elapsed timers
- ✓ Object-Oriented Programming: Proficient in enumerations, structures, signal-slots, and OOP concepts
- ✓ Dynamic UI & Data Management: Real-time updates, dynamic buttons, file I/O, user preferences and configuration
- ✓ Multithreading & Exception Handling: Smooth performance and robust error handling with pop-up notifications
- ✓ Hardware Interaction: Direct manipulation of hardware addresses through FPGA (experience with DE10-nano Dev Kit, STM32, etc)
- ✓ Communication Protocols: Expertise in designing efficient communication protocols over LAN, CAN, Serial communication between devices

EMPLOYMENT HISTORY

REMOTE PROJECTS

From Dec 2023

Remotely led diverse teams delivering AI/ML, data science, C++ and website projects on time and budget. Boosted client results and thrived in online collaboration. Driven by learning, skilled in artificial intelligence and software engineering, I'm ready to contribute to your team's success.

SOFTWARE ENGINEER| QT C++ | PAKISTAN

March 2017 – Dec 2023

Delivered strategic software projects by crafting URs, SRSs, and SQA docs. Mastered software architecture, UI design, and hardware integration and debugged with precision, ensuring timely and high-quality results through close collaboration with the QA team. The organization develops software under the JPL California, IEEE software quality insurance processes, DO-178B, and DO-178C.

SKILLS, COURSE & STRENGTHS

- Programming Concepts ★★★★☆
- Communication ★★★★★
- Requirements Gathering ★★★★☆
- Project Management ★★★★★
- Version Control System (GIT) ★★★★★
- Leadership and Team Building ★★★★☆
- Data Analysis ★★★★★
- Data Visualization ★★★★☆
- Artificial Intelligence ★★★★☆

- ✓ Data Extraction & Communication: Efficient extraction of information at the bit level using LAN, CAN, serial port, and USB

  Test Automation & Reporting:
- ✓ Automated Testing: Single-click execution of test procedures with final report generation
- ✓ Structured Reporting: Well-formatted HTML reports with printing options

- *PakVent-1(Hospital ICU Ventilator with pressure and volume modes, software is developed under JPL California, and IEC-62304)* — *03-2020 08-2021*
- *Multi-Function Test Equipment (Frequencies, Phase-differences, Signal Amplitudes, Signal Indications, DC supplies, etc)* — *11-2022 03-2024*
- *Test Equipment of Power Management Unit 5x1* — *11-2022 03-2024*
- *Automatic Gas Monitoring System in Chemical Lab* — *04-2023 08-2023*
- *Test Equipment of Industrial Accelerometer* — *11-2021 06-2023*
- *Motorola mobile firmware repair (ADB & Meta mode, Repair IMEI No, Unblock SIM, etc)* — *04-2021 09-2021*
- *Test Equipment of 2-axis Gyro-scope* — *01-2022 01-2023*
- *3-Axis Inertia measurement Unit Calibration System* — *01-2019 04-2020*

WEB PROJECTS

- ✓ WordPress, Plugins, Themes, Migrations, Forms, Customizations, Debugging, etc
- ✓ Strong understanding of PHP syntax, semantics, debugging, OOPs, and wrapper classes
- ✓ Dynamic page building from information stored in the database and user-levels
- ✓ Proficiency in MySQLi
- ✓ Understanding of web servers, HTTP protocols, and Security Awareness
- ✓ Proficiency in HTML5, CSS3, bootstrap, JavaScript, JQuery, AJAX and JSON objects
- ✓ Cross-browser compatibility and Accessibility considerations
- ✓ User and their post management
- ✓ Deployment and monitoring of the daily activity of users

- *Islamic Inspirations (WordPress-based religious content website)* — *06-2021 Continue*
- *AudioCloud (Web-based platform for audio file uploading from anyone, with many features like, private/public, like/dislike, download, share, etc)* — *05-2021 10-2021*
- *Online Pakistan Cars & Bikes (user registration, selling and buying of cars and motor-bikes)* — *07-2020 10-2020*

- Software & Web Development ★★★★★
- Research ★★★★★
- Affiliate Marketing (Blogging) ★★★★☆
- Search Engine Optimization ★★★★☆
- Graphic Design and Video Editing ★★★★☆

PROGRAMMING LANGUAGES

- QT C++, Python, Django
- WordPress, E-Commerce, Plugins, Themes, PHP, MySQLi,
- HTML5, CSS3, Bootstrap, JS, AJAX, JSON, QML
- Enumeration, Structures, OOP, Software lifecycle, Agile & SCRUM methodology

EDUCATION

MS COMPUTER SCIENCE
COMSATS University Islamabad, Wah Campus, Pakistan
Learn ML, DL techniques, Interpretable AI Techniques, Visualization, NLP, Information retrieval, Data-Mining, NN Designing, and the Django framework

BS COMPUTER SCIENCE
Virtual University of Pakistan
Software development, Qt C++ framework, Web development, WordPress, Project and Team Management, Reverse Engineering

PUBLICATIONS

- SHAP DeepExplainer for noteworthy Features using MLP on NHANES Heart Disease Dataset (under review from the publisher)

LANGUAGES

English ★★★★☆

HOBBIES

Volleyball, Cricket, Hiking, Running, motor-biking, Touring, Puzzle games

REFERENCES

References are provided when needed.