ABDULLAH SAIM

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Career summary so far

Dedicated computer science professional with a focus on leveraging technical skills for innovative solutions. Experienced in machine learning projects, including reinforcement learning. Skilled in web development with proficiency in MERN stack applications and expertise in Java and JavaFX for building efficient and scalable software solutions. Detail-oriented and analytically driven, committed to staying updated on the latest technologies and continuously improving to deliver optimal results in challenging environments. Seeking a role to apply and enhance skills in machine learning and web development.

Education

National University of Science and Technology, Islamabad, Pakistan   **Nov 2021 – Present**
Bachelors of Science, Computer Science

Punjab Group of Colleges, Lahore, Pakistan   **Nov 2019 – Nov 2021**
Intermediate, FSc. Pre-Engineering

Achievements

- Successfully led a software engineering project that was recognized as the 2nd best among course participants.

Internships

Pakistan Railways   **Aug 2022– Sep 2022**
QA Tester   *Lahore*

- Tested Safer Saheli app by Pakistan Railways under National IT Board, Pakistan

Notable Github Projects

Time Table Generator | Python, Tkinter   **Dec 2021**

- Developed Python Time Table Generator with Tkinter GUI.
- Backtracking algorithm ensures clash-free schedules.
- Displays class/faculty timetables; outputs to CSV files.
- Makeup Schedule GUI for efficient class rescheduling.

Shuttle Service App | Java, Java FX, MySQL   **June 2022**

- Developed a Shuttle Tracking System in Java and JavaFX for real-time shuttle tracking.
- Separate modules for drivers and users, enhancing user experience.
- Utilizes MySQL database for efficient data storage and retrieval.
- Graphical interface for drivers to view and update their location.
- Users can visualize shuttle locations, request pickups, and experience dynamic map updates.
- Used JavaFX for GUI, MySQL for database connection.

SAMS App | Python, PyQt, MySQL   **Nov 2022**

- Developed Python-based Clothing Store Management System.
- Unified platform for customers, operators, and delivery staff.
- Automates order processing, inventory tracking, and real-time data insights.
- Three interconnected applications for seamless business management.
- Used Cloudinary for image and video management, FPDF for PDF generation, PyQt for user-friendly GUI.

Tower of Hanoi Game | x86 Assembly Language   **Jan 2023**

- Developed a graphical Tower of Hanoi game in Assembly language, utilizing keyboard input for user interaction.

- Utilized irvine32.inc for console output and graphical interface.
- User interface allows keyboard input for moving tiles and displays the current state of the game board.
- Includes a Python script for automating the solving process, enhancing user experience.
- Offers a challenging and interactive way to practice Assembly language programming skills.

JanWhere | MERN Stack   **May 2023**
- Developed a MERN stack website, JanWhere, focused on raising awareness and conserving indigenous animal species in Pakistan.
- Utilized MongoDB for flexible and scalable data storage, Express.js for server-side framework, React.js for dynamic UI, and Node.js for server-side execution.
- Integrated Google Maps API for an interactive map interface, allowing users to locate and mark the presence of indigenous animals.
- Implemented user authentication, profiles, and interactive map features, enhancing the user experience.
- Enabled users to create new posts by uploading images of encountered animals, enhancing community engagement.
- Emphasized the importance of conservation by combining technology and community participation.

C++ Shell | C/C++   **June 2023**
- Developed a C++ Shell Project for file and process management.
- Implemented features like changing directory, printing current working directory, and more.
- Created commands for running C++ programs, finding text in files, and managing files/processes.
- Demonstrated proficiency in file operations, process management, and CLI development.

Ludo AI | Python, Pygame, ML, Deep Learning   **Dec 2023**
- Engineered a reinforcement learning-based Ludo AI using Python, demonstrating advanced machine learning capabilities.
- Devised a state representation capturing critical game aspects such as token positions, current player, and dice number to inform decision-making.
- Formulated a reward system to drive the AI's learning process, incentivizing strategic moves aligned with successful Ludo gameplay.
- Employed a Q-learning model with a dynamic neural network architecture.
- Demonstrated the AI's prowess in automating complex gameplay and decision-making, highlighting its capacity to evolve strategies independently.

Sign Language Recognition | Python, Yolo   **Jan 2024**
- Spearheaded an innovative project focused on real-time American Sign Language (ASL) recognition, utilizing YOLO v8 and self-annotated datasets to detect ASL symbols with exceptional precision.
- Successfully achieved a commendable 92% accuracy in recognizing individual ASL signs, highlighting the efficacy of YOLO v8 in the dynamic context of sign language.
- Pioneered the creation of complete words by seamlessly connecting recognized symbols in real-time, contributing to a holistic approach for ASL communication.
- Positioned the project as a significant advancement in bridging the communication gap for the deaf and hard-of-hearing community, with potential transformative impacts on real-world communication scenarios.