Muhammad Bilal Arshad

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OBJECTIVE

Final Year Software Engineering student with a focus on the MERN stack and React Native. Seeking opportunities to apply my knowledge to real life scenarios.

EDUCATION

COMSATS University Islamabad   Feb 2020- Feb 2024
Bachelor of Science in Software Engineering   **CGPA: 3.00 / 4.0**

SKILLS

Programming Languages:	JavaScript, Python
FrameWorks:	React, Node.js, Express.js
DataBases:	Firebase, MongoDB, SQL
Backend Development:	RESTful API Design, Server-side scripting
Authentication:	Firebase Authentication, Passport.js, JWT Tokens, Cookies
Tools and Technologies:	Postman/Insomnia (API testing), Docker (Containerization)
Version Control:	Git, GitHub
Cloud	Amazon Web services (AWS)
Soft Skills	Problem Solver, Fast learner, Team player, Calmness under Pressure

PROJECTS

Electronic Police Patrolling and Dispatching Assistant (Final Year Project)

- **Objective:** Develop an advanced Electronic Crime Reporting System that will combine mobile apps, websites and AI/ML to counter the growing rate of crimes. The system consists of three websites (Admin , Police Station and Dispatcher) and two mobile apps (Police App, Civilian App)

Admin Website

- **Features**
  - Designed and developed the frontend using ReactJs.
  - Developed the backend for this website using expressjs.
  - Integrated firebase and MongoDB.
  - Integrated real time communication using firebase.
  - Integrated Google Maps for HeatMap generation.

Dispatcher Website

- **Features**
  - Designed and developed the frontend using ReactJs.
  - Developed the backend for this website using expressjs.
  - Integrated firebase and MongoDB
  - Integrated real time communication using firebase and websockets.
  - Implemented authentication using passportjs.
  - Integrated Google Maps for crime Assigning.

Police Station Website

- **Features**
  - Designed and developed the frontend using ReactJs.
  - Developed the backend for this website using expressjs.
  - Integrated firebase and MongoDB
  - Integrated real time communication using firebase.
  - Implemented authentication using passportjs.
  - Integrated Google Maps for crime reporting.
  - Can scan suspect faces to verify whether they are already in the record or not using ML model.

Police App

- **Features**
  - Responsive interface using React Native Expo.
  - Stack Navigation for smooth navigation.
  - User Authentication.
  - Real time communication using firebase.
  - Geolocation services for crime tracking.
  - Alert generation for danger.

Civilian App

- **Features**
  - Responsive interface using React Native Expo.
  - Drawer Navigation for a seamless experience.
  - User Authentication.

- o Real time communication using firebase.
- o Geolocation services for crime reporting.
- o Complaint and feedback service.
- o User Rating System.
- o Tracking all the submitted reports

Middle Earth BookShop

- **Objective:** Develop an app for bookshop owners to keep track of their inventory and sales
- **Features**
  - o Responsive middle earth inspired interface using react native expo.
  - o Stack Navigation for a smooth experience.
  - o User Authentication
  - o Can add, update and delete items in inventory
  - o Can add sales.
  - o Shows Sales record.
  - o Can sort sales record based on item or date.

Spotify Downloader

- **Objective:** Develop an easy way to download songs from spotify.
- **Features**
  - o Designed and developed the UI using tkinter.
  - o Fetches song and playlist details from Spotify using API calls.
  - o Used pytube to search and download that song.
  - o Supports single song and playlist downloads from YouTube.
  - o Implements multithreading for asynchronous and non-blocking downloads.
  - o Utilizes a queue for efficient communication between threads.

Python Ransomware

- **Objective:** Develop a program to decrypt and encrypt files
- **Features**
  - o Used Fernet to encrypt the files.
  - o Key storage for encrypted files,
  - o .Using key to decrypt the encrypted files.