

?/tariqjamel

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### SUMMARY

Having engaged in a variety of projects in programming and circuit systems, I possess strong skills in app development using Kotlin, having successfully created multiple applications.

With a strong academic background, I am currently seeking an internship opportunity to further develop my skills and contribute to innovative projects.

# Skills/Tools

KotlinJet Pack ComposeFirebaseREST APIsC++DockerMQTTNode-redLatexProteusPSpiceMatlab

# **P**ROJECTS

## Self Learning

#### To Do App:

- A task management app allowing users to create, update, and delete tasks.
- Features email signup, authentication, and scheduled task notifications.
- SQLite database, push notifications.

### Chat App:

- A messaging app that supports real-time communication between users.
- Features phone number login with OTP, profile customization, and push notifications.
- Firebase authentication, messaging, storage.

#### Weather App:

- An app providing real-time weather updates for multiple cities.
- Features dynamic UI adjustments based on weather conditions and animated visuals.
- Weather API, Retrofit, Room database.

### Dictionary App:

- An app that provides word definitions and usage examples.
- Structured using MVVM architecture for clear and manageable code.
- Jetpack Compose, Dagger Hilt, Retrofit, MVVM, Coroutines, Flow.

### **Shopping App:**

- A cross-platform shopping app for Android, iOS, and desktop.
- Features data storage, user authentication, and analytics.
- Kotlin Multiplatform Mobile (KMM), Firebase, REST APIs.

#### **Encryption App:**

- An app for secure message encryption and decryption.
- Implements AES encryption with Base64 encoding for data security.
- JNI C++, AES encryption, Base64 encoding.

#### Chat Bot App:

- An interactive chatbot app for engaging in conversations with users using Gemini API.
- Allows history viewing, clearing, and searching within the chat history.

# **Semester Projects**

Racing Spiderman (Digital Logic Design (DLD) project):

Created a project where Spiderman climbs and races on a rope using ESP32 and necessary components.

Solar Sunlight Tracker (Engineering Workshop Project):

Designed a system for solar panels to track sunlight and rotate towards the light for optimal energy generation.

Blind Stick (Circuit and Systems I Project):

Developed a stick for the visually impaired that detects obstacles within range in front of the stick.

Water Management System (Circuit and Systems II Project):

Developed a system that detect different water levels triggering an LED to glow accordingly.

Fire Alarm System (Electric Circuit Project):

Designed a fire alarm to detect and alert in case of fire hazards.

Part of Speech Tagging (C++ project):

Implemented a system to identify parts of speech in user-input sentences.

Candy Crush Game (OOP Project):

Developed using SFML library for graphical interface and game mechanics.

Spell Checker (DSA Project):

Implemented a system that checks the spelling of user-entered sentences using Levenshtein Distance for error detection and correction.

Server-Client Messaging System (Operating Systems project):

Developed a client-server messaging system with message storage on the server using pthread management and ftok() in C language.

# **EDUCATION**

**BS** Computer System Engineering

2022 to Present

University of Engineering & Technology - Peshawar