

Contact



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Employment

Since 2019

Freelance Software Engineer



Education

2016-2020

BS, Computer Science

Balochistan University of IT,
Engineering & Management
Sciences (BUIITEMS)



Awards

Android Developers Challenge
Google, 2020

Balochistan Star Award for IT
Balochistan Stars, 2020

Hult Prize On-Campus Winner
Hult Prize Foundation, 2020



Design Skills

Photoshop / Illustrator 8 years

Adobe XD 3 years

Adobe After Effects 2 years

Mirwise Khan

Android Engineer

Experience

Android Developer | Machine Learning Engineer

Apr 2021 – May 2021

Emotion App – Audio based Sentiments Recognition

- Designed a Flask API to extract audio features (preprocess) and send prediction as json.
- Orchestrated an Ubuntu docker container and deployed the machine learning model on Heroku.
- Built an audio recording android app by implementing custom Audio Recorder and generating valid metadata for the audio format to be compatible/acceptable with model.
- Used MVVM as architecture complemented by data-binding and view-models.

Android Frontend Developer

Mar 2021 – Apr 2021

Basket Box – Grocery Android App

- Built grocery app in Jetpack compose (1.0.0-beta03).
- Implemented custom UI, navigation graph with builder architecture and Scaffold view.
- Added custom animations, carousel View Pager and Ads.

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Professional Skills

Development – Client

- 1) Python Expert in Task Automation and API Integration.
- 2) Android Deep understanding of Navigation Graphs, View Models, Data/View Bindings and lifecycle aware apps.
Experience in developing battery saving apps and opting out of battery performance constraints.
Front-end Experience in building custom UI and working with **Jetpack Compose**.
Testing Experience with Unit and Instrumentation testing (**Robolectric, Mockito & JUnit**).
Hands on experience with UI Testing (**Espresso**).
- 3) Kotlin Experience in using coroutines, Flows in conjunction with MVI architecture.
- 4) Java Solid understanding of **ATOM, OOP**, and building thread-safe and socket-based applications.
- 5) Version Control Adept in Git based version control – **GitHub, GitLab & Bitbucket**

Development – Server/Cloud

- 1) Databases Experienced in MySQL, GCP Buckets and Cloud Firestore.
Moderate understanding of Amazon AWS and MongoDB.
- 2) API Design Experienced in designing REST and Socket API (Python, NodeJS, Spring, PHP).
- 3) Administration Experienced in orchestrating Linux (Apache/Nginx) on a VPS (Virtual Private Server).
Proficient in deploying apps to Google Cloud Suite – GCP AI Platform, GCP Functions, Firebase Web Hosting and CRON Jobs.
- 4) Docker Proficient in configuring container and deploying pipeline.



Published Apps



AgriFarm, 2020

Smart crop doctor



Snorlux, 2020

Sleep tracking android app



BUIITEMS, 2019

Lite CMS Campus Solution app



Open Source



Stack Overflow

mirwise-khan

~327k people reached



Github

mirwisek

Arctic Code Vault Contributor



Languages

C/C++

1 year

Java

7 years

Kotlin

2 years

Python

3 years

JavaScript

4 years

Php

3 years

SQL

5 years

HTML

3 years

CSS

3 years

Past Experience

Android Engineer | UI Designer

Aug 2019 – Sep 2019

Snorlux – Sleep tracking android app

- Designed high-fidelity prototype in Adobe XD.
- Developed stunning frontend User Interface with material design.
- Created the app in Kotlin using MVVM architecture.
- Used data-binding and view-binding in combination with live data.
- Implemented data source Firebase Firestore as single repository while limiting network call by caching results in Room (by 10% from normal usage).
- Managed resource intensive task such as image loading with Picasso and others with Kotlin coroutines.
- Integrated latest Google Payment SDK and tested with Play Console Merchant test account.
- Set up AdMob account for client, added Interstitial Ads with static and video advertisements.

Software Engineer – Team Lead

Mar 2018 – Apr 2020

AgriFarm Android App – Final Year Project

- Built crop disease classifier using image processing and machine learning techniques.
- Built android app using Java 8 and beta android APIs such as CameraX.
- Designed schemas and coordinated with team to formulate database migration procedures.
- Developed RestAPI using Spring Boot that collects distributed RSS news feeds into central source.
- Built the app with MVVM architecture and android architecture components such as Room database for persistent storage, navigation graphs for fragments, data and view binding with view models.
- Deployed classifier model on Google Cloud AI Predictions Platform.
- Migrated from online classifier to on-device (offline) model on TFLite. Thus, reduced hosting cost by 80% while maintaining the same accuracy.
- Managed effectively a team of 4 members and introduced them to productive tools such as Jira, Slack, Facebook Organizations and Git Version Control (GitHub).

Software Engineer – Team Lead

Jun 2018 – Dec 2020

BUIITEMS Campus Lite App – BUIITEMS

- Built an android app - a specialized, lite campus solution for students and staff.
- Utilized web scrapping techniques (Selenium) to collect student results from campus website.
- Coordinated with university faculty staff and designed a specific timetable designer with JavaFX and Java Spring Boot that would publish the timetable directly connected with android app.
- Developed messaging system with Restful Socket API using NodeJS and SocketIO with notifications powered by Firebase Cloud Messaging.
- Reduced the hosting cost by 75% by migrating the app from Firebase Firestore to Linux server environment with MySQL and NodeJS.

Extracurricular

Alumni and Volunteer – Pak-US Alumni Network

2016–2021

Eco Saviour (Climate Change Awareness) Grant – Pak Red-Crescent Society

2018–2019

Multimedia Designer – ACM Buitems Student Chapter

2016–2019

Organized on campus self-funded – Markhor Programming Workshop

2018–2018

Actively Participated in Hackathons – Softec Fast Lahore, SEE – PAF Kiet, Karachi

2016–2018