Mmedara Josiah

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Professional Skills

- Java – 7 years.
- Android – 4 years
- Python/Django – 4 years
- Kotlin – 3 years
- MERN – 2 years
- Spring Boot – 2 years
- MySQL – 6 years
- JavaScript – 4 years
- Assembly Language – 2 years
- C/C++ - 2 years
- GitHub – 7 years
- Firebase, Azure, AWS – 4 years

Projects

January 2022 – Present
EUNOIA

***Technologies:** Java, Kotlin, Android Studio, AWS Amplify, Jetpack Compose

- Co-created 'Eunoia', a sleep routine app
- Made in Kotlin using Jetpack Compose
- Used AWS Amplify for static file storage, GraphQL api, authentication, etc
- Users can sign in, sign up, receive a confirmation code, and get access to their dashboard
- Used a multi navigation graph to improve the accessibility of the app
- Users can add bedtime stories, white noise, self- affirmation audio, stretching and breathing (routine elements) to a sleep routine and use the routine whenever they want.
- Users can adjust the white noise using an in-app mixer
- Users can set their sleeping and waking alarm, an 8-hour countdown that allows them to sleep for 8 hours and join a slumber party with friends or family and share a routine
- Once a routine or a routine element has been added to the users list, it can be used online or offline
- Users can also add routine element to the app and make it visible to others
- The added elements will have to be approved by the Eunoia team
- Once its approved, the user gets paid the more the routine element is used by other users
- Media Player is used to play all the audio
- Used stripe as the payment processor.
- Users can set up a monthly subscription for the app
- Used MVVM design pattern because it allows clean communication between the UI and the data source
- Used ROOM database to enable offline access.
- Other technologies used – Notifications

February 2023 – Present
IN YOUR VOICE READING SYSTEM

****Technologies:*** MERN, Socket.io, Axios, Eleven Labs, AWS, AI

- Created a website where users can record a voice sample and their human voice can be used to read any given text.
- The recorded sample is used to create a voice profile for the user using AI
- A user can have multiple voice samples
- It is built on the back of the Eleven Labs api.
- Socket.io is used to send data from the client to the server
- Axios is used to query both the Eleven Labs and my api
- AWS S3 buckets are used to store a user's recordings

VOTING SYSTEM

****Technologies:*** React, Node.js, Express.js, Socket.io, Mongoose db

- Created a voting website
- Users can create polls and vote on other polls
- A poll consists of a question and 2 – 4 options
- Other users can select an option from a poll and that updates the poll results for all users
- This update uses socket.io
- The top polls and the recent polls are displayed on the home page

May 2021 – July 2021
DIA MKPO

****Technologies:*** Java, Kotlin, Android Studio, Firebase Firestore

- Created 'Dia Mkpo', a restaurant app.
- Used Firebase Firestore as my database to store User and Meal data
- Users can sign up and sign(authentication) into the app using email and password or Google Sign in.
- Used a navigation bar to improve the accessibility of the app
- On the home page, meals are displayed in different categories.
- There is a search page that allows users to find specific meals.
- Using Firebase Firestore's NoSQL database to store data
- Users can access and reorder their past orders.
- Users can like a meal by double tapping on it and view all liked meals on the setting page.
- A single tap opens the product page of the selected meal.
- Here, a user can select the quantity and add the meal to the cart.
- Meals are also categorized in the restaurant's menu.
- When meals are in the cart, a user can checkout and pay for meals.
- Used stripe as the payment processor.
- Used a navigation graph to allow navigation between fragments and activities.
- User can also add or change the delivery address.

- Used MVVM design pattern because it allows clean communication between the view and the model.
- Was forced to think about how to best organize information on the app to achieve the best user experience.
- I came up with the technical strategy to make user of the app love it
- I oversaw all stages of the development cycle (definition, design, development, and rollout)
- I maintained high code quality and testability while also fixing bugs
- Other technologies used – Google maps API, AWS Amplify, Media player, Notifications, GraphQL

March 2022 – May 2022
BABA BARTER

***Technologies:** Python, Django, Visual Code, HTML, CSS, JavaScript

- Created 'Baba Barter', a trade by barter website.
- Used MySQL (Django's ORM) as my database to store user and product details.
- Users can sign up and sign in, add products they wish to swap and explore products posted by other users.
- Used Bcrypt to hash passwords before storing in the database.
- Using a token, an email is sent to the user's email when signing up or changing the email address.
- When a product is clicked, a product page opens to show more information about the product.
- From here, the user can message the owner of the product to discuss swapping products.
- Used WebSocket to implement messaging between users.
- When a message is sent, it is added to the database and displayed on the chat screen in appropriate format.
- Also, a product can be compared to other products with a filter to control the range of comparison.

Jan 2019 – April 2019
REAL TIME ELEVATOR SYSTEM

***Technologies:** Java, IntelliJ

- Co-created a real-time elevator system using Java.
- We had to simulate 4 elevators functioning efficiently on 22 floors.
- Each elevator was a client, the scheduler was the host, and the floors were the servers.
- Data packets containing elevator request information is sent from the floor, through a data socket to the scheduler when a passenger presses the elevator request button on a floor.
- The scheduler had to store requests and send data packets containing floor request information to the appropriate elevator.
- The elevators have appropriate movement. That is, an elevator containing a passenger and moving up cannot go down to pick up another passenger even if it is the nearest elevator to the floor.
- But the elevator can stop on its way up to pick up a passenger that is also headed up.
- I also designed the Graphical User Interface (GUI) on which the program was simulated.
- We had to apply good design principles and real time principles like threading, priority handling and task scheduling.
- As the leader of the team of four, I was responsible for assigning roles and guiding the team to complete the project.

Sept 2018 – Dec 2018
RISK: GLOBAL DOMINATION

***Technologies:** Java, IntelliJ

- Co-created the 2D version of RISK: GLOBAL DOMINATION, a board game using Java.
- 2-6 players compete to dominate all territories in the game.
- This project was solely focused on using clean object-oriented programming principles to build a big program.
- We had to use the right data structures to store data. For example, we used arrays to store the Territories because there was a fixed number of Territories in the game.
- We used an ArrayList to store Players because the number of players could vary between two and six.
- Programmed the GUI used to display and play the game.
- A screen was used to display live information to all the players.
- We applied the Model View Controller (MVC) design pattern in this program

Professional Experience

April 2018 – January 2023
ANDROID DEVELOPMENT TA
Coding Dojo

- Taught Saudi Arabian university graduates how to make Android apps using Kotlin.
- Taught how to perform CRUD operations using ROOM database
- Taught the use of the MVVM design pattern to ensure good code structure
- Developed custom apps for teaching purposes
- Using APIs to transfer data into Android apps
- Testing UIs and app functionality
- Designing high quality UI for android apps
- Version control system using GIT Repository.
- Taught how to use Coroutines to avoid overloading the main thread and slowing down the app
- Using Firebase Firestore's NoSQL database to store data
- Proper software documentation, coding conventions, UML diagrams, code reviews & other deliverables was designed as part of best software coding practice.
- Administrative work like daily meetings with management to discuss the current and plans
- Creating and grading students' assignments and exams
- Learning to communicate with students who mostly speak a foreign language
- ***Technologies:*** Kotlin, Java, Android Studio, Firebase Firestore, Jetpack Compose

Sept 2018 – Sept 2020
2D GAME DEVELOPMENT INSTRUCTOR
Real Programming 4 Kids

- Taught 2D game development to kids and teenagers
- Learning new programming languages on a weekly basis
- Led a team of six to make plans and solve problems daily
- ***Technologies:*** C++, Java, C#, Visual Basic

Education

Software Engineering

- *Carleton University, Ottawa, Canada*
- **Coursework:** Real-time systems, Object Oriented Programming, Web Development, Android Development, Database Management, Graphical User Interfaces, Operating Systems, Hardware Programming, Computer Memory Management, Data Structures, Game Development

Bookkeeping and Accounting

- *Algonquin College, Ottawa, Canada*
- **Coursework:** Bookkeeping, Payroll management, Business math, Business computer applications