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Education

Sudan, Khartoum University of Khartoum Oct 2015 to May 2022

- **Major:** Civil engineering, B.S.C.
- **Programming courses:** Computer programming basics, Applications of programming in civil engineering using Fortran.
- **Graduation project:** Prediction of concrete compressive strength using Artificial neural networks.

Employment

Senior software developer Fekra Dec 2021 until now

Shrek: Service providing customer mobile app using Flutter (Dart) and Firebase.

- Worked with a team of 4 and was in charge of collaborating with the UI/UX team to ensure that our design was error free.
- Developed 3 methods for booking services which are by ordering the service, in-chat offers and by Booking a service.
- Improved the app security by implementing Firebase security roles with unit tests.
- Implemented cloud functions for aggregation operations on orders and status tracking for orders that allowed the tracking of sales and viewing statistics of operations.
- Configured the app to be able to use 2 languages (English and Arabic).
- <u>Leveraged knowledge</u> in Git, Flutter mobile apps using Dart and Firebase using typescript and Node.js.

Software developer Exit:Fund Nov 2020 to Dec 2021

Beem: Virtual doctor visits mobile app using Flutter (Dart) and Firebase (Google Play).

- Updated app UI to reach pixel-perfect design and improved visuals.
- Improved the chat experience of the app by fixing the file upload/download process and implementing image thumbnails.
- Participated in features recommendation and business planning.
- Introduced user tips and insights features to improve users' engagement with the app.
- Added user tracking with aggregation and analysis which helped identify problems with the app UX.
- Applied crash reporting to help identify and debug bugs in production.

Forward: Calendar with to-do list website using Flutter (Dart) and Firebase (Website).

- Worked with a team of 2 to publish this website in 2 weeks for experimental purposes.
- Configured authentication of users on the website by using Firebase authentication to implement Google sign-in and email authentication.
- Improved the user experience by implementing task groups to help the user categorize his tasks.
- <u>Leveraged knowledge</u> in Git, Flutter mobile and web apps using Dart, Firebase using typescript and node.js and MixPanel.

Simsimy: Two android apps for parental control using Java.

- Created a home launcher app that controls child access to apps and videos.
- The second app was for the parent to schedule the child's allowance time and chose what apps he can use.
- Leveraged knowledge in Android using Java, XML and YouTube mobile API.

Software Projects

Manga Online (Google Play)

- Developed an Android mobile app using Java that allows users to scrape and read Japanese comics (manga) that has 5000 downloads on Google play.
- Increased app speed and consistency by changing the network repository to use Rest API instead of scraping the manga.
- Improved app efficiency to reach 99% crash-free users by implementing crash reporting tools and fixing the bugs.
- Increased app speed by decreasing the user's requests flood by implementing a cache management system.
- Rebuilt the app in flutter using Dart to publish the IOS version.
- Programmed a manga download service that downloads the manga while the app is in the background.
- <u>Utilised:</u> Native android using Java, XML, Flutter using dart and Web scrapping.

Werewolf Online

- Developed an android mobile multi-player werewolf game using Java and XML.
- Implemented backend using JavaScript with a Node.js server with Express.
- Utilised Socket.io for handling the chat and in-game network requests.
- Improved user experience by in-game voice chat with WebRtc for peer2peer connection.
- <u>Utilised:</u> Native android using Java, XML, JavaScript, Node.js, Express, Socket.io and WebRtc.

Plants vs Zombies 3d Clone (YouTube)

- Developed a simple plants vs zombies game clone in 3d with unity using C#.
- Implemented a game manager that handles the money system, zombies wave spawner and plants building utility.
- Utilised: Git, Unity and C#.

Prediction of compressive strength using Artificial neural network

- Led a team of 3 to develop this project, which was where I was responsible for the development part.
- Collected the data and then performed several data processing tasks including completing missing data, normalizing the data and cleansing the data.
- Developed a 7 hidden layer Artificial neural network model using Keras.
- Trained the model and got an acceptable error of 83%.
- Created a website that serves as the model's user interface and is hosted on a Node.js server.
- <u>Utilised:</u> Python, Keras, Numpy, Pandas, Google Colab, Node.js using JavaScript, Html and CSS.

Events

EEESE 2017: Participated in the development of a smart glove that converts hand gestures into spoken words, and worked as a presenter.

EEESE 2018: Led the development and the presentation of a smart voice assistant project and worked as a developer on a project that recognizes sign language and converts it to an understood language.

EEESE 2018 Hackathon: Awarded for 2nd place in Software development – Disabilities solutions track as a part of team Light.

SSE problem-solving workshops: Mentored junior programmers in the workshop. **IndabaXSudan2019**: Attended the indaba artificial intelligence Bootcamp in Sudan.

Skills

Programming languages: Java, Dart, Python, Typescript, JavaScript, Html, Css, C#, Fortran.

Frameworks: Android, Flutter, Git, Keras, Numpy, Firebase, Unity, Node.js, WebRtc.

Concepts: Design patterns, Networking, Artificial intelligence, Rest API, Game development.

Soft skills: good communication skills, Excellent time management, Fast learner, Team player, very patient and great adaptability.

Languages

Arabic (Native speaker), English (Very good), French (Beginner).

Hobbies

Travelling, Psychology, language learning, reading, swimming and watching anime.