Mohamed Mahmoud Raslan

Software Engineering Student

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EDUCATION

Bachelor of Computer Engineering and Software Systems, Ain Shams University

Expected graduation date: July 2027

PROFESSIONAL EXPERIENCE

Software Engineer, Roots Academy UK ∂

Aug 2024 – present

Roots Academy is an online education platform enabling instructors to conduct live sessions, share interactive content, and manage quizzes.

- Reduced production errors by 25% as measured by Sentry error tracking by refactoring legacy code, implementing error handling, and applying Clean Architecture.
- Improved app performance and reduced app size by 20% as measured by load times and user feedback by refactoring, implementing caching, and using Clean Architecture, Bloc, and SOLID principles.

Freelancer Flutter Developer, AdBlip @

Jun 2024 – present

- Developed Flutter web and mobile apps ℰ for a digital advertising platform connecting users with media owners.
- Implemented a responsive UI using Flutter for web and mobile and integrated Google Maps API, Google Places API, and payment gateways.
- Implemented Clean Architecture, Bloc state management, and integrated Firebase for notifications and robust data handling.
- Incorporated error handling, network checks, and optimized memory usage with pagination, lazy loading, Flutter Secure Storage and Cached Network Images.
- Designed and implemented smooth animations, improving UX through visually appealing transitions and interactions.

Co-Founder and Flutter Team Lead, Slash Hub &

Oct 2023 - Jun 2024

- Led the Flutter development team, responsible for training and mentoring new developers, ensuring code quality, and managing task distribution. Utilized Jira, Trello, and GitHub to streamline team collaboration and enhance workflow.
- Conducted code reviews to maintain high standards and best practices across the development team.
- Managed CodePush using Shorebird to deliver app updates seamlessly without requiring users to download a new version.
- Coordinated the integration of third-party APIs for online payment and shipping partners, from onboarding meetings through to implementation, deployment, and production issue resolution.

Co-founder and Flutter Developer, Slash Hub &

Apr 2023 - Oct 2023

- Co-founded Slash Hub, a cross-platform e-commerce app \mathscr{O} facilitating seamless discovery of Egypt's top local brands, featuring advanced search, filtering, and secure payment integration.
- Accomplished the launch of a scalable e-commerce app as measured by 2,000+ downloads and 4.7+ app store ratings by developing a Flutter app with Provider state management, Firebase integration, and thorough API testing using Postman and Swagger.
- Improved app reliability as measured by reduced crash rates by leveraging Firebase Crashlytics, Analytics, and performance monitoring tools to gather feedback and resolve issues.
- Enhanced app security and performance as measured by user retention metrics by implementing Flutter Secure Storage and Cached Network Images.
- App Store link $\mathscr O$ Play Store Link $\mathscr O$

PROJECTS

Zaitoon, Flutter, Repo link ∂

Jan 2024 - Apr 2024

- Led the development of a cross-platform app using Flutter, designed to support individuals in war-torn regions and assist in reuniting families by using AI face-detection and face-matching algorithms implementing TensorFlow Lite.
- Employed Bloc state management and Clean Architecture to maintain a scalable, maintainable, and well-organized codebase across multiple complex features, facilitating an incremental and efficient development environment.
- Implemented secure user management and data handling using Firebase Authentication and Cloud Firestore, and developed a scalable marketplace within the app to support local businesses owned by war survivors.
- Utilized Hive for offline functionality and implemented localization to support multiple languages,

Healthy and Happy, Flutter, Repo link \mathscr{D}

Jan 2023 - Jun 2023

- Developed a cross-platform app using Flutter and Firebase to address the United Nations' 3rd Sustainable Development Goal (Good health and well-being)
- · ranked in the top 100 globally in the Google Solution Challenge 2023.

- Integrated with wearable devices to track sleep, heart rate, stress, and steps, enhancing user health monitoring.
- Utilized YouTube APIs for in-app video browsing and searching, incorporating custom filters to provide relevant content.
- Integrated with Firebase Authentication and Firebase Database for secure user management and data storage.
- Followed the MVC design pattern to ensure maintainable, scalable, and efficient code architecture.

Multi-player Racing Game, Flutter, Repo link ∂

May 2023 - Jul 2023

- Led the development of a cross-platform Distributed Systems Application of a racing game with integrated live chat rooms, utilizing Flutter and Firebase while applying distributed systems principles to ensure scalability and performance.
- Leveraged Firebase Real-time Database for real-time multiplayer support, responsive gesture controls, crash detection, and seamless updates, delivering a dynamic and engaging gaming experience.

Student Course Management System, Spring Boot, Repo link &

Jun 2025 - Aug 2025

- Developed a web-based app for student course registrations, grades, and records using Spring Boot, demonstrating AOP (Aspect-Oriented Programming) for logging, performance monitoring, security, and exception handling.
- Implemented SOA (Service-Oriented Architecture) with dedicated services for students, courses, enrollments, and notifications; integrated Spring Data JPA with MySQL, Spring Security, and Swagger for RESTful APIs.
- Built responsive UI with Thymeleaf and Bootstrap, ensured reliability with 47 JUnit tests.

SKILLS

Languages and Frameworks: Dart, Flutter, Kotlin, Java, C, C++, Python, HTML, CSS, JavaScript, Spring Boot.

Tools: Git, GitHub, Postman, Swagger, Jira, Trello, Android Studio, Xcode, Visual Studio Code.

SWE Skills: Data Structures & Algorithms, Problem-Solving, Object-Oriented Programming (OOP), Design Patterns, CI/CD, Unit Testing, Software Engineering, Service-Oriented Architecture.

Flutter and App Development Skills: App Deployment and Distribution, CodePush using Shorebird, State management (Provider and Bloc), Caching using Flutter Secure Storage and Shared Preferences, RESTful API, Integration with Google Maps, Location services, Payment gateway integration, Responsive UI, Clean architecture, and MVVM and MVC architectural patterns. Database and Cloud Services: MongoDB, MySQL, SQFlite, and Firebase (Auth, Cloud Firestore, Realtime Database, Google Analytics, Crashalytics, Performance Monitoring, App Hosting, App Distribution, Cloud Messaging, Remote Config).

ACTIVITIES

Software engineering careers Google Developer Student Club (GDSC) event organizer and host. $\mathscr D$	May 2023 – May 2023
Flutter Instructor - GDSC, Ain Shams University. Ø	Feb 2023 - Oct 2023
GDSC Lead - GDSC, Ain Shams University. $\mathscr D$	Aug 2022 – Jul 2023
Ranked in Top 100 in Google's Solution Challenge 2023. ℰ	Jan 2023 – Jun 2023
Ranked 5th in Google DevFest '22 & '23 Hackathon.	Dec 2022 - Dec 2022
Egypt Google DevFest '22 & '23 organizer. ⊗	Dec 2022 - Dec 2023

CERTIFICATES

- Flutter App Creation: Google Maps Integration Guide ℰ
- The Complete Android Developer Course - Build 14 Apps ℰ
- Deep Dive into Clean Architecture in Flutter ${\mathscr O}$
- Easy to Advanced Data Structures
- The Complete Flutter Development Bootcamp with Dart ℰ
- Google Cloud Essentials ∂