Khaled Mohamed Ibrahim

software engineer

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SUMMARY

I am a software engineering student with strong proficiency in C++ and Python, foundational experience in Dart and Flutter, and a solid understanding of algorithms, data structures, and OOP principles. Eager to contribute to impactful projects in mobile and web development, with hands-on experience using Git, version control, and collaborative workflows.

EDUCATION

Faculty of computer science and Artificial Intelligence at Cairo university Sep 2023 – Expected Jul 2027 | Egypt

COURSES & CERTIFICATES

Flutter, At Digital Egypt Pioneers Initiative

Jun 2025 – Dec 2025

- Actively learning to design, develop, and maintain responsive and user-friendly mobile applications using Flutter technology.
- Studying Dart fundamentals, Flutter advanced topics, Firebase, and mobile deployment for Android and
- Gaining hands-on experience with Git and GitHub for version control, along with learning functional documentation and unit testing methodologies.
- Acquiring knowledge in UX/UI basics to enhance application usability and user experience.
- Including prompt engineering for effective communication and problem-solving within development contexts, culminating in a comprehensive Capstone Project.

Flutter, At route academy

Jan 2025 – Jun 2025

- Dart Programming Language: Variables, data types, loops, arrays, exception handling, object-oriented programming (OOP), mixins, async/await.
- Flutter Framework: Stateless & Stateful widgets, widget life cycle, theming, localization.
- State Management: MVVM, BLoC Pattern, Provider Pattern.
- Firebase Integration: Authentication, Firestore.
- App Features: GPS & Google Maps, APIs, Push Notifications, Animations.
- Testing & Clean Code: Unit Testing, SOLID Principles, Software Development Life Cycle, Agile Methodology.

TECHNICAL SKILLS

Programming Languages: Proficient in C++, Python, and Java, with a strong foundation in developing efficient and scalable console applications. Experienced in Dart for cross-platform mobile development using Flutter. Familiar with scripting and automation tasks using Python.

Currently expanding Python skills into data science and machine learning using NumPy, pandas, and scikit-learn.

Object-Oriented Programming (OOP): Solid understanding of OOP principles, including encapsulation, inheritance, polymorphism, and abstraction. Applied OOP concepts to design modular, maintainable, and reusable code in projects.

Data Structures & Algorithms: Skilled in implementing and optimizing data structures (e.g., arrays, linked lists, stacks, queues, trees) and algorithms (e.g., sorting, searching, dynamic programming).

Flutter Development: Proficient in building cross-platform mobile applications using Flutter and Dart. Experienced in creating responsive UIs, state management, and integrating APIs for dynamic app functionality. Developed projects showcasing clean architecture and best practices in Flutter development.

GUI Development: Built graphical user interfaces (GUIs) using Qt and RAD Studio for desktop applications. Designed interactive and user-friendly interfaces for projects like image processing and task management.

Front-End Development: Familiar with HTML, CSS, JavaScript.

Back-End Development with Django: Built web applications using Django, including REST APIs, authentication systems, and ORM-based models. Able to build full-stack applications by connecting front-end UIs with robust backend logic

SOFT SKILLS

- Teamwork
- Adaptability
- Leadership
- Time Management
- Communication Skills
- Creativity
- Attention to Detail
- Work Ethic
- Emotional Intelligence

LANGUAGES

- Arabic, Native
- English, B2

Projects Using C++

- Tic-Tac-Toe Game: Implemented a console-based game with win detection logic.
- <u>Image processing app</u>: image editing and filtering
- Encryption & Decryption Operations: Applied basic cryptographic algorithms.

Projects Using Python

- Numbering System Converter: CLI tool to convert binary, decimal, hex.
- <u>Employees management system</u>: system to detect the employee of the month
- <u>The 100 game</u>: Terminal-based logic game implementation.

Projects Using Flutter

- Solar System App: Interactive 3D model and educational facts.
- <u>Tic-Tac-Toe Game</u>: Mobile version with clean architecture.
- Event Planning App: Event creation, RSVP, Google Maps API.
- News App: Fetches real-time news via APIs with Provider.
- <u>Islami App</u>: Islamic content, prayer times, and custom UI.

Projects using JavaFX

• <u>Budget Tracking App</u>: Expense logging, category filtering, and charts.

Projects using Django

• Recipe finder: Web app with search/filtering, user auth, and database management.