# **Khaled Mohamed Ibrahim**

software engineer

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#### **SUMMARY**

I am a software student, with a strong command of C++ and Python, complemented by foundational skills in Dart and Flutter, with a solid understanding of algorithms, data structures and object-oriented programming principles. Passionate about continuous learning and innovation, with a commitment to leveraging technical expertise and creativity to contribute to impactful projects in the technology sector.

#### **EDUCATION**

Faculty of computer science and Artificial Intelligence at Cairo university

Sep 2023 – 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 iOS.
- 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: setState, FutureBuilder, StreamBuilder, 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, graphs) and algorithms (e.g., sorting, searching, dynamic programming). Demonstrated ability to solve complex problems efficiently and improve application performance.

**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. Key Strengths: Strong problem-solving and critical-thinking skills. Ability to work collaboratively in team environments. Passionate about continuous learning and applying new technologies to solve real-world problems.

#### **SOFT SKILLS**

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

#### **LANGUAGES**

- Arabic, Native
- English, B2

#### **PROJECTS**

# Projects Using C++

- <u>Tic-Tac-Toe Game</u>
- Image processing app
- Encryption & Decryption Operations

### Projects Using Python

- Numbering System Converter
- Employees management system
- <u>The 100 game</u>

## Projects Using Flutter

- Solar System App
- <u>Tic-Tac-Toe Game</u>
- Event Planning App
- News App
- <u>Islami App</u>

# Projects using JavaFX

- Budget Tracking App
- · Projects using Django
- Recipe finder