# Aya Abdulaziz

*.NET Developer*

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## Summary

Passionate .NET Backend Developer skilled in C#, ASP.NET Core Web API, Entity Framework Core, SQL Server, and OOP (SOLID principles, design patterns). Experienced in building scalable desktop and web applications, applying clean architecture, and integrating with databases through LINQ, stored procedures, and repository patterns. Adept at turning concepts into production-ready solutions with focus on performance, maintainability, and teamwork.

## Education

Bachelor's Degree in Computer Science and Artificial Intelligence        [Oct 2021 – Jun 2025]
 GPA: 3.5 (3rd in class)

## Projects

### Graduation Project – ADAS & Self-Driving Assistance System (A+)        [Oct 2024 – May 2025]

1. **.NET Core API**
   o Developed with ASP.NET Core using layered architecture (Api, Core, Data, Infrastructure, Services).
2. **Integration with Embedded Devices**
   o Receives input from Raspberry Pi (AI models) and ESP32 (main controller).
3. **Event Processing & Alerts**
   o Processes driver drowsiness / lane / object detections and triggers alerts to the mobile app.
4. **Data Logging & Storage**
   o Stores detections and alerts in a database for review, analysis, and reporting.
5. **API Documentation (Swagger)**
   o Exposed and tested endpoints through Swagger for easy integration and validation.

### Complete C# Desktop Application        [2025 – Present]
-Built a full-stack C# application using OOP principles.
-  Implemented database access with **Dapper** (instead of EF Core).
-  Integrated SQL Server with C# backend and UI for end-to-end functionality.

### Contact Manager (OOP-Based C# Project)        [2025]
- Developed a **Contact Manager application** applying core OOP concepts.
- Implemented CRUD operations with layered architecture (UI, Service, Repository).

### String Pipeline (Delegate Project)
-Designed an interactive **String Processing Pipeline** using C# Delegates.
-Showcased event-driven programming and modular data processing.

## Experience

**Rust Developer – Corelia** [Oct 2024 – May 2025]

✓ Developed high-performance modules in Rust for embedded and systems programming.
✓ Contributed to production-ready solutions with focus on memory safety and performance.

**Embedded Engineer – ElHagry Company** [Mar 2024 – Jul 2024]

✓ Designed and implemented STM32-based motor control firmware, improving response latency
✓ Integrated sensors and communication protocols (UART, SPI, I$^2$C) in embedded systems.

**Programming Instructor – STEM** [Nov 2023 – May 2024]

✓ Delivered training in C/C++ programming and data structures to STEM students.
✓ Mentored projects in IoT and embedded applications.

## Technical Skills

- ✓ **Backend Development**: C#, ASP.NET Core Web API, Entity Framework Core, LINQ, ADO.NET, RESTful APIs, JWT Authentication, MVC, Swagger, Postman
- ✓ **Databases**: SQL Server (Stored Procedures, Joins, Functions, Triggers), MySQL, Database design
- ✓ **Frontend (Basic)**: HTML, CSS, JavaScript
- ✓ **Tools & Platforms**: Visual Studio, VS Code, Git/GitHub, Docker (basic), CI/CD (basic), Agile/Scrum

## Soft Skills

- ✓ Problem-Solving & Critical Thinking
- ✓ Teamwork & Collaboration
- ✓ Communication & Presentation
- ✓ Adaptability & Continuous Learning

## Languages

- ✓ Arabic: Native
- ✓ English: C1
- ✓ French: Basic