

Hello

I'm Ammar Elmesaly

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Skills

- **Languages:** TypeScript, JavaScript (ESM), Rust, SQL
- **Backend & Databases:** NestJS, Node.js, Express.js, PostgreSQL, TypeORM, MongoDB, REST APIs
- **Frontend & Desktop:** React, Electron, Vite
- **Tools & Environment:** Linux (Fedora), Git, GitHub Actions
- **Spoken Languages:** Arabic (Native), English (Fluent)

Technical Projects

28 Jun, 2026 - 25 Jul, 2026

Installments System

- Built a modular **NestJS** backend to generate and track customer installment payment plans
- Designed **PostgreSQL** schemas using **TypeORM**, leveraging **ACID transactions** to prevent payment race conditions
- Managed database updates across environments using version-controlled **migrations**
- Developed a midnight **Cron job** to identify overdue payments and alert admins via **Telegram Bot API**
- Implemented multi-tier **RBAC** (Superadmin, Auditor, Collector) and JWT authentication to secure endpoints

27 Dec, 2025 - 31 Mar, 2026

DVLD App

- Designed a comprehensive **TypeScript monorepo** featuring shared logic across Client, Server, and **Electron** environments
- Designed relational **PostgreSQL** schemas to track driver history, license statuses, and application pipelines
- Developed a specialized UI for administrative workflows

14 Sep, 2025 - 28 Oct, 2025

Quran Api

- Designed and deployed a high-performance REST API using **Node.js** and **Express** with **TypeScript**
- Integrated **PostgreSQL** to serve structured religious text data with high availability
- Focused on clean code principles and **API documentation**, ensuring the API is easily consumable for third-party developers

25 Sep, 2025 - 1 Oct, 2025

Rust TUI Todo Manager

- Built a high-performance **Rust TUI** using **Crossterm** for low-latency, keyboard-driven task management
- Engineered a custom data persistence layer for efficient terminal-based **CRUD** operations
- Leveraged Rust's **ownership model** to ensure a memory-safe and crash-free architecture

Education

October 2024 - July 2028

Mansoura University, Mansoura, Egypt - *Computer Science*