ABDALLA YAHYA

Backend Developer

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Summary

backend developer with 8 years in programming 5 years in web development using Node.js-Express.js-NestJS-MongoDB-MySQL and deployment on AWS. I have built ERP-POS-CRM systems and a Linux server monitoring web app and iot integration and 3 years in IoT and embedded using Qt-QML-C++ Python-RaspberryPi-ESP32-Arduino I have worked with many sensors and am an expert in real-time data using the MQTT protocol and Socket.IO and I have built home-automation devices

TECHNICAL SKILLS

Node.js · NestJS · Express.js · Microservices , · ERP · POS · CRM

REST API · GraphQL · WebSockets · Socket.IO · HTTP · HTTPS · Mqtt

Mongodb · MongoDB C Driver · JSON · Redis · PostgreSQL · mysql

AWS · EC2 · S3 · Docker · GitLab CI/CD · Git · Nginx · Apache2 · OpenStack · Kubernetes

OAuth 2.0 · JWT · OpenSSL · OpenAPI/Swagger

React.js · Next.js · CSS · HTML

IoT · IoT Integration · Raspberry Pi · ESP32 · Arduino · Sensors

I²C · SPI · UART · GPIO · PWM · ADC

Qt · QML · QML Plugin · C++ · GCC · CMAKE

Linux · Bash · FFmpeg

Experience

Prosoft Solutions
Saudi Arabia

Backend Developer
10/2023 - 08/2025

- Scope: Co built a full stack ERP + POS and eCommerce for medical-pharma multi-branch inventory, batches-expiry , purchasing-sales invoicing-VAT , suppliers-returns users-roles, audit logs; plus modules for accounting, procurement, project management, risk & compliance,supply chain
- Backend: delivered 4 NestJS microservices on AWS (EC2, S3) exposed REST-GraphQL APIs designed PostgreSQL schemas
- Object Storage: implemented S3 pre-signed + multi-part uploads (≤ 5 GB) with retries-monitoring raised upload success and availability for images/docs
- Frontend Collaboration: built Next.js flows (catalog , purchase orders, receiving , POS) and worked closely with frontend-DevOps to keep pipelines stable and fast
- Business Impact: kicked off with a process analysis to streamline the business cycle developed effective efficiency across warehouses , sales , and customer interactions

Code Chef
Egypt

Backend Developer
06/2021 - 08/2023

- Developed & refactored ERP-POS & e-commerce backends Nest.js-Express.js
- Built a GraphQL gateway with Redis caching increased RPS 30% without extra infra cost
- Built a full stack server monitoring & management system using Node .js and MQTT for real time communication . Deployed a lightweight agent (child .js) on each server to publish live IP , CPU/memory usage , disk space, MAC address uptime/health via MQTT topics. Designed a web dashboard (grid view) showing real time server status (up/down), disk capacity/usage and live metrics . Click through on any server opens a terminal-like interface that's simpler and quicker than SSH for routine ops supports remote command execution with streamed output in real time . Used Socket.IO for UI updates and Node's os module for system metrics improved visibility and incident response through low latency telemetry .

Experience

RemnumOffice

Egypt

Mid-Level Embedded Systems & IoT Developer

01/2020 - 12/2021

- Developed Qt6QuickMongoDB a QML plugin by encapsulating the MongoDB C Driver within a C++ library Registered typed APIs with QQmlEngine, enabling asynchronous CRUD operations connection pooling, signals-slots integration with QObject-Q_PROPERTY for QML access, and facilitated BSON to JSON conversion. Utilized CMAKE for packaging on Linux-ARM (Raspberry Pi). Achieved a significant decrease of approximately 70% in MongoDB integration efforts per project
- Participated in the development of a Raspberry Pi CoovaChilli captive portal, which included setting up a hotspot and managing DHCP, DNS, and iptables, along with authentication and session management. Implemented backend features for promotions using Twilio for SMS and an email library. This initiative led to a significant boost of approximately 25% in mall sales by providing on-login promotions and focused remarketing strategies.
- Worked in a 3 engineer embedded team to deliver an ESP8266 custom-PCB solution with real-time MQTT telemetry to a backend and Raspberry Pi touchscreen dashboard threshold alerts (temp/humidity/gas/fire) via Twilio SMS/email for residential & industrial use. Contributed the device firmware MQTT topicsschema while teammates covered PCB revisions and server dashboards.

RemnumOffice

Egypt

Junior Embedded Systems & IoT Developer

01/2018 - 01/2020

- built a image editor using QT-QML-C++ worked in ubuntu desktop and raspberry pi touch screen
- learned basics linux commands line install raspberry pi os system like Stretch OS and enapled ssh and configuerd system files
- worked with hardware sensors like temp sensor - gas sensor - motion sensor and raspberry pi cam
- read sensors data via I2C-SPI-UART-GPIO using wiring pi lib and publish the data over mqtt protocol
- Integrated IoT Devices with AWS: Connected Raspberry Pi, ESP8266, and ESP32 with AWS IoT Core and created Lambda functions for seamless integration with DynamoDB.
- built a car security system using Raspberry Pi, Raspberry Pi Camera, a GSM module with SIM card, and a motion sensor. when motion is detected, it sends an SMS alert and starts video streaming from the car using FFmpeg & FFserver. internet connectivity runs over the SIM card, and Gammu is used to send the SMS via the GSM dongle.

Education

Port Said University - Faculty of Commerce

Port Said, Egypt

Bachelor of Commerce (B.Com) - Accounting

09/2017 - 07/2022

- Relevant coursework Business Process Design, Project Management, Financial Accounting
- Operations & Logistics
- Built foundation in business workflows (invoicing, VAT, inventory, supply chain), later applied
- To ERP/POS system development

Languages

Arabic Native

English Advanced

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🌐 Linkedin

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