ABDALLA YAHYA

Backend Developer Node.js & IoT Systems Developer

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🔗 https://www.abdallayahya.tech   📍 Dubai, UAE -Available for Immediate Work

SUMMARY

Senior Backend Developer (8+ years) delivering Node.js/NestJS microservices and REST/GraphQL APIs; strong data layer (PostgreSQL/Postgres, MySQL, MongoDB, Redis); GitLab CI/CD, Docker, AWS (EC2, S3), Nginx, Apache, Kubernetes; built ERP/POS modules (inventory, sales, invoicing, payments, taxes/VAT, users/roles, receipts/printing, barcode, multi-branch, payment gateways); integrate IoT/embedded (ESP32, Raspberry Pi, C++/Qt/QML) via MQTT/HTTP with JWT/OAuth2, device provisioning, buffering/retry, monitoring; Arabic (Native), English (Professional).

SKILLS

JavaScript (ES6+), TypeScript, Node.js, NestJS, Express.js, C++17, Qt/QML, Next.js (NextJS), React (ReactJS), IoT (IOT), Raspberry Pi (Raspberrypi), ESP32 (esp32), REST, GraphQL, HTTP, Socket.IO, MQTT, PostgreSQL, MySQL, MongoDB, Redis, JWT, OAuth2, Input validation, Rate limiting, OpenSSL (openssl), GitLab CI/CD, Docker, Kubernetes, AWS (EC2, S3), Nginx (nginx), Apache HTTP Server (apache server), Linux (Ubuntu), Git, Bash, FFmpeg, OpenStack, Agile Methodologies, Microservices

EXPERIENCE

Back-End Developer

| Prosoft Solutions

📅 01/2024 - 12/2025   📍 saudi arabia

- Architected microservice backends and IoT integrations with Node.js, NestJS, and Express.
- Built and maintained AWS S3 image upload pipelines on EC2 for high availability.
- Enforced CI/CD processes across teams for streamlined production deployments.
- Designed scalable system architectures to support thousands of concurrent users.

Senior Node.js Developer

Code Chef

📅 01/2023 - 12/2024   📍 egypt

- Developed backend services for ERP, POS, and eCommerce platforms using NestJS, Express, and Next.js.
- Worked with MongoDB for scalable data storage
- Collaborated with frontend teams to build responsive UIs and implement RESTful APIs.
- Managed cloud deployments on AWS EC2, including server setup and maintenance
- Built internal tools to streamline admin workflows and automate reporting processes.

Junior Linux & IoT Developer

RemnumOffice

📅 01/2019 - 11/2022   📍 remote

- Automated deployment, configuration, and maintenance of Linux-based embedded systems using Bash scripting.
- Developed initial IoT proof-of-concepts on Raspberry Pi using Python and Shell scripts.
- Created Qt/QML-based UI prototypes for touch-enabled interfaces in embedded systems.
- Set up MQTT brokers and internal HTTP APIs for device communication and monitoring.
- Designed and tested GPIO-based hardware control flows for automation use cases.
- Supported firmware updates and field-testing phases for multiple Raspberry Pi-based solutions.
- Collaborated with senior engineers to troubleshoot hardware-software integration bugs.
- Improved deployment reliability and reduced manual setup time by introducing reusable scripts and templates.

Developer

Freelance

📅 01/2018 - 12/2019   📍 remote

- Built backend APIs and IoT workflows for startup prototypes using Node.js and Raspberry Pi.
- Delivered custom automation projects using node.js and Linux-based systems.
- Implemented sensor-to-cloud data pipelines
- Supported clients remotely across different domains including retail and smart home setups.

EDUCATION

Bachelor of Commerce (B.Com) – Accounting
Port Said University – Faculty of Commerce, Port Said, Egypt
🗓 09/2017 - 07/2022

PROJECTS

Pharmacy POS & Warehouse ERP
🗓 01/2023 - 05/2023
🔗 https://www.youtube.com/watch?v=wjIKWGrpOPo&list=PLS3CWo-UmGas7FqQbllVoT6mqfOXfgZdm

Technologies: Node.js, NestJS, Next.js, MongoDB, AWS EC2 & S3
- Developed a full-featured POS and inventory management system for pharmaceutical warehouses.
- Features: dual product categories, cart & invoice flow, bulk stock CSV upload, loyalty points, and financial reporting.

Smart Waiter Delivery Robot (Prototype)
🗓 04/2024 - 04/2024
🔗 https://www.youtube.com/watch?v=txRomTCKbFQ&list=PLS3CWo-UmGasoi5mE03NyAuZJB-GhFxXw

Technologies: Qt/QML, C++, Raspberry Pi with Touchscreen Display, Ultrasonic Sensors, DC Motors
- Developed a prototype restaurant delivery robot featuring a touchscreen interface for table selection and hardware control.
- Implemented obstacle detection and real-time motor control.
- Designed in-place rotation logic and return-to-kitchen functionality for autonomous flow.

. Qt6QuickMongoDB Plugin
🗓 01/2021 - 02/2021
🔗 https://github.com/RemnumOffice/Qt6QuickMongoDB

Technologies: C++, Qt 6, MongoDB C Driver
- Authored an open-source Qt plugin to expose full MongoDB CRUD and aggregation operations directly in QML.
- Simplified database integration for embedded UIs and rapid prototyping in Qt Quick applications.

Mall Captive WiFi Portal & Marketing System
🗓 02/2019 - 04/2019

Technologies: Node.js, CoovaChilli, MySQL, Raspberry Pi
- Created a captive portal displaying live promotions from mall stores upon WiFi connection.
- Required user phone/email validation via SMS; managed store subscriptions and collected leads for marketing.

Server Monitoring & Remote Control System
🗓 01/2018 - 04/2018
- Built a Node.js-based system for monitoring and remotely managing Linux servers.
- Each server runs a "child.js" agent script that publishes IP, memory, disk usage, and MAC address via MQTT.
- Central dashboard subscribes to all agents and allows real-time terminal command execution.
- Commands are sent from a web UI, and responses are streamed live using Socket.IO.
- Enables administrators to monitor and control servers securely and efficiently.

KEY ACHIEVEMENTS

End-to-End Systems Delivery
Built and deployed over 6 complete solutions integrating hardware and software across IoT and web platforms.

Real-Time Communication
Successfully implemented MQTT-based real-time data exchange between Raspberry Pi, ESP32, and cloud APIs.

Reusable Developer Tools
Created a cross-platform QML plugin for MongoDB, improving productivity for Qt/QML developers.

Embedded Monitoring Solutions
Developed smart monitoring systems for vehicles and servers, featuring live data feeds and alert notifications

Pharmaceutical ERP Design
Engineered a robust POS and ERP solution tailored for medicine and supplies warehouses, streamlining stock and order management.

Creative Problem-Solving:
Delivered original technical solutions without relying on direct online references, showcasing strong prototyping and reverse-engineering skills.