

ABDALLA YAHYA

Back-End & IoT Systems Developer

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📍 Sharjah, UAE — Available for Immediate Work

SUMMARY

Accomplished Back-End & IoT Systems Developer with 8+ years of experience architecting scalable microservices, IoT integrations, and enterprise-grade applications. Expertise in Node.js, NestJS, AWS cloud infrastructure, and real-time systems with a proven track record of delivering production-ready solutions across diverse industries. Demonstrated leadership in mentoring teams and implementing CI/CD best practices to enhance code quality and deployment efficiency.

SKILLS

JavaScript, TypeScript, Node.js, NestJS, Express.js, React.js, Next.js, Python, C++, QML, Bash, RESTful APIs, GraphQL, Socket.IO, MQTT, MongoDB, DynamoDB, MySQL, PostgreSQL, Redis, AWS (EC2, S3, IoT Core), Docker, Nginx, Apache2, Linux (Ubuntu), Git, OpenStack, FFmpeg, Gammu, Kafka, CI/CD, Twilio, Stripe, HTML5, CSS3, Tailwind CSS, Bootstrap, Material UI

EXPERIENCE

Back-End Developer

Prosoft Solutions

📅 2024 - 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

📅 2023 - 2024 📍 egypt

- Led backend development for ERP, POS, and ecommerce platforms using NestJS, Express, and Next.js.
- Integrated MongoDB and Redis for scalable and real-time data processing.
- Collaborated with frontend teams to build responsive UIs and implement RESTful APIs.
- Managed cloud deployments on AWS EC2, including Docker containerization.
- Built internal tools to streamline admin workflows and automate reporting processes.

Junior Linux & IoT Developer

RemnumOffice

📅 2019 - 2022 📍 remote

- Automated deployment, configuration, and maintenance
- 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

📅 2018 - 2019 📍 remote

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

EDUCATION

B.Com. (Commerce)Port Said University, Egypt | 2021 Grade

Port Said University,

Port Said, Egypt

PROJECTS

Smart Waiter Delivery Robot (Prototype)

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

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

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.

Pharmacy POS & Warehouse ERP

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.

Server Monitoring & Remote Control System

- 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.

Reusable Developer Tools

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

Pharmaceutical ERP Design

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

Real-Time Communication

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

Embedded Monitoring Solutions

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

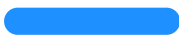
Creative Problem-Solving:

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

LANGUAGES

Arabic

Native



English

Advanced

