# Tarek Ragab

# SUMMARY

Full-Stack Software Engineer with expertise in .NET, React, Azure, and scalable data-driven solutions. Proven track record in delivering high-performance web applications and data pipelines that improve efficiency, performance, and reduce operational costs.

## SKILLS

- Programming Languages: C#, C++, JavaScript, TypeScript, Python, Dart.
- Frameworks & Platforms: .NET, Node.js, Nest.js, React, Flutter.
- Cloud & Serverless: Azure Function Apps, Azure Service Bus, Azure Web Hosting.
- Data & APIs: SQL Server, PostgreSQL, RESTful APIs, Websockets, Message Queuing.
- Version Control & CI/CD: Git, GitHub, GitHub Actions
- Miscellaneous: UML, Documentation Practices, Markdown, LaTeX, Agile, Scrum, Waterfall.

# Work Experience

# Software Engineer (Remote), Upwork

Jan 2023 – Present

- Delivered 10+ large-scale projects, starting from system design, implementation, documentation, and maintenance.
- Provided consultation and guidance to help diverse companies build and maintain long-term projects.
- Delivered different dashboards to visualize core data in real-time and along to alerting systems.
- Designed and delivered Database migration across different database engines.

#### Full-Stack Software Engineer, RES-VA

Jun 2024 – Present

- Delivered full-stack solutions using React Js, C#, .NET, and SQL Server, easing the KPI tracking and data management process.
- Built automated workflows with Azure Function Apps and Service Bus, reducing data collection time by 10x and cutting manual workload.
- Designed and implemented automation pipelines to ease deployment and maintainability of the ongoing apps,
- Creation of pre-compiled SQL views, reducing response latency by 40%.
- Collaborated with CTO and Senior Software Engineer to design detailed ERD for a multi-tenant file management system.

#### Mid-Level IoT Firmware Engineer (Full-time), SudoTechs

Jun 2022 – Oct 2024

- Designed IoT systems architecture and implemented firmware for a variety of micro-controllers, supporting 20+ industrial devices.
- Optimized embedded workflows, reducing device data transmission delays by 80%.
- Delivered customized IoT solutions that scaled to handle 2× more connected devices.

## IoT Instructor (Part-time), CIC, Cairo

Oct 2022 - Oct 2023

- Designed and delivered a practical IoT curriculum for over **200 students**.
- Delivered more than **80 Hours** of practical sessions across different workshops.

#### Digital Fabrication Trainee (Internship), Sector B5

Jun 2021 – Sep 2021

- Gained practical experience with 3D printing (FDM, SLA) and CNC machinery.
- Designed and built an autonomous maze-solver robot that completed obstacle courses 20% faster than baseline models.

# PROJECTS

## Lead Generation Reporting App

(RES-VA)

Developed a reporting platform using .NET, SQL, Redis, React TS to visualize and export real-time lead and productivity metrics, cutting report generation time by  $3\times$ .

# Loan System Reporting App

(SANAD Finance)

Implemented a reporting solution using  $\mathbf{SQL}$ ,  $\mathbf{Python}$ ,  $\mathbf{Elasticsearch}$ , enabling  $\mathbf{3} \times \mathbf{faster}$  query **performance** and improving cashflow projection accuracy by  $\mathbf{25}\%$ .

## End-to-End Data Pipeline

(RES-VA)

Built a scalable **Python**-based pipeline with **Azure Function Apps**, **processing 2**× **more data** and automating ingestion, transformation, and export of CRM and dialer records.

## **Human Resources Management**

(Future of Egypt)

Developed a responsive HR management platform with Flutter Web frontend and Node.js backend, heavily reliant on SQL with extensive use of views and stored procedures, boosting reporting efficiency by 40%.

## Licencer Desktop App

(Boreal Laser Inc.)

Created a cross-platform licensing management desktop application using Flutter Desktop, reducing manual license issuance time by 50%.

#### IoT Dashboard

(Boreal Laser Inc.)

Developed a real-time IoT monitoring dashboard using Vanilla HTML, CSS, JS, improving sensor data visibility and reducing diagnostic time by 30%.

#### Industrial Web Dashboard

(Graduation Project)

Built an industrial process visualization tool using **Node.js**, **React.js**, boosting operational response times.

#### Maze Solver Robot pi-bot

(Sector B5)

Designed and programmed an autonomous maze-solving robot using C++, achieving a 25% improvement in navigation speed.

#### EDUCATION

2018 – 2024 Bachelor of Telecommunication and Electronics Engineering at **Helwan University**, Cairo, Egypt.

#### LANGUAGES

Arabic C2 – Native / Bilingual

English C1 – Full Professional