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● **ABOUT ME**

Software Engineer specializing in ERP systems and enterprise application development. Experienced in building scalable full-stack solutions using NestJS, Next.js, and React.js, with strong expertise in RESTful APIs, database design and management (PostgreSQL, MySQL), and real-time features including live data updates and analytics dashboards. Skilled in translating Figma designs into responsive, production-ready interfaces and delivering end-to-end systems across frontend and backend. Familiar with microservices architecture, cloud deployment, and AI-assisted development tools to improve productivity, code quality, and delivery speed. Focused on building reliable, scalable, and data-driven enterprise applications.

● **WORK EXPERIENCE**

**FULL STACK ENGINEER – NEXTBYTE** – 16/02/2026 – 31/05/2026 – ISLAMABAD, PAKISTAN

**Responsibilities:**

- Developed scalable ERP modules and enterprise applications using modern full-stack architecture
- Converted Figma designs into responsive, production-ready UI components
- Built and maintained RESTful APIs and backend services for enterprise workflows
- Implemented real-time features using WebSockets and system communication via RabbitMQ
- Worked with AI-assisted development tools to accelerate debugging, code generation, and feature development
- Optimized system performance, database queries, and application architecture

**Tech Stack:** Next.js, NestJS, Prisma, PostgreSQL, RabbitMQ, WebSockets, WebRTC, Figma, Docker, AI-assisted development tools

**FULL STACK ENGINEER – ONLINE DIMENSIONS** – 25/10/2025 – Current – REMOTE, LEBANON

**Responsibilities:**

- Developed full-stack ERP and eCommerce platforms with scalable microservice-based structure
- Built reusable frontend components and responsive dashboards from UI/UX designs
- Developed and maintained backend APIs with secure authentication and role-based access
- Handled database design, optimization, and migrations using ORM-based architecture
- Contributed to CI/CD pipelines for automated deployment and system reliability
- Applied AI-assisted development practices to enhance productivity and reduce development time

**Tech Stack:** React.js, Next.js, Node.js, NestJS, Prisma, PostgreSQL, Docker, RabbitMQ, CI/CD

**INTERN SOFTWARE ENGINEER – SPOTTROOP** – 01/04/2023 – 01/04/2024 – KIEL, GERMANY

**Responsibilities:**

- Developed IoT-based web and mobile applications with real-time dashboards
- Implemented backend services and APIs for sensor data processing
- Worked on MongoDB-based data storage and retrieval systems
- Participated in Agile development cycles and team-based delivery
- Assisted in containerized deployments using Docker

**Tech Stack:** React, React Native, Node.js, MongoDB, Docker, Git

● **PROJECTS**

01/09/2024 – 02/08/2025

**LiverLens – AI-Powered Liver Tumor Segmentation Platform**

- Trained a U-Net model in PyTorch to segment the liver and tumors in CT scans (0.955 Dice score for the liver)
- Built the web app with Next.js, including 2D and 3D scan viewers
- Developed REST APIs with Flask and PostgreSQL, with role-based access for multiple clinics
- Generated automatic PDF reports with tumor size and location
- Deployed with Docker and set up CI/CD using GitHub Actions

**Tech Stack:** PyTorch, U-Net, Next.js, Flask, PostgreSQL, Docker, GitHub Actions

**Link** <https://liverlens.fawadiqbal.dev>

01/05/2025 – 02/08/2025

### TripleONE – Full-Stack Job Portal Application

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- Built a scalable job portal with multi-role access (job seekers, employers, admin)
- Integrated secure JWT authentication, AWS S3 file uploads, and email notifications
- Developed real-time job tracking, advanced search, and responsive admin, job seeker and employer dashboards
- Delivered improved hiring workflow and platform reliability for business users

**Tech Stack:** Next.js, React, Node.js, Express, PostgreSQL, Prisma, AWS S3, Docker

**Link** <https://tripleoneuae.com>

31/08/2026 – 08/10/2026

### PingCrood – Real-Time Messaging & Video Calling Platform

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- Built a full-stack real-time messenger with a Flutter mobile app, a Next.js web client and an admin panel, all on a shared NestJS API
- Implemented one-to-one and group chat over Socket.IO, with typing indicators, message editing, stories, Random Match and QR-code friend linking
- Developed WebRTC voice and video calling with FCM push ringing and a self-hosted coturn TURN server for reliable connections
- Secured accounts with JWT authentication, email OTP verification, two-factor authentication, chat lock and content moderation tools
- Deployed with Docker and Nginx with zero-downtime releases, health checks and rollback; published on Google Play As Alpha Testing

**Tech Stack:** Flutter, Dart, NestJS, Node.js, Next.js, React, PostgreSQL, Prisma, Redis, Socket.IO, WebRTC, Firebase Cloud Messaging, Docker, Nginx

**Link** <https://pingcrood.com>

10/05/2025 – CURRENT

### Kids Coding Platform & KCP Talent – Full-Stack Learning and Jobs Platform

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**Aim:** Take children aged 9–16 from their first lines of code to paid real-world work, safely and in their own language (English, Arabic, Urdu). Graduates who turn 18 then move on to KCP Talent, a jobs marketplace.

- Built a kids' learning platform with parent-controlled accounts, three coding tracks, an in-browser code editor with auto-checked challenges, and gamification (XP, streaks, leaderboards)
- Added mentor code review, team hackathons on a self-hosted Git server, and a client "hub" where senior students do paid projects
- Built KCP Talent, a separate marketplace where adult graduates find freelance work, with escrow payments, a double-entry ledger, identity checks, and a one-time profile import from the kids' platform
- Shipped a Flutter mobile app and deployed both platforms with Docker and CI/CD on Oracle Cloud

**Tech Stack:** Next.js, React, TypeScript, NestJS, PostgreSQL, Prisma, Redis, Flutter, Docker, Stripe

**Links** <https://kids.fawadiqbal.dev> | <https://talent.fawadiqbal.dev>

31/05/2023 – 01/08/2023

### University Attendance Management System (UAMS)

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- Built a desktop-based University Attendance Management System (UAMS) using Java Core, Swing, AWT, and MySQL
- Applied custom MVC architecture to separate UI, logic, and data layers
- Created role-based dashboards for Admin, Faculty, and Students with secure login and access control.
- Used JDBC for database connectivity and performed CRUD operations for attendance, users, and departments.
- Applied OOP principles (inheritance, abstraction) for modular, maintainable code.

**Tech Stack:** Java, Swing, AWT, JDBC, MySQL, NetBeans, MySQL Workbench.

**Link** <https://github.com/fawadeqbal/UAMS>

01/12/2024 – 08/12/2024

### Autonomous Line-Following Robot – Embedded Systems

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- Built an autonomous robot that follows a predefined black line using IR sensors
- Developed real-time motor control logic based on sensor input for path following
- Tuned sensor thresholds to ensure stable performance on varying surfaces
- Assembled hardware using ESP8266, motor driver, and custom robot chassis

**Tech Stack:** ESP8266, C/C++, IR Sensors, L298N Motor Driver

**Link** [https://github.com/CodeCrood/smart-iot-world/tree/main/Autonomous\\_Line\\_Follower\\_Car](https://github.com/CodeCrood/smart-iot-world/tree/main/Autonomous_Line_Follower_Car)

25/07/2025 – CURRENT

### Environmental Monitoring Dashboard – Pharmaceutical Production

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- Built a full-stack IoT-based monitoring system to track temperature and humidity in pharmaceutical production.
- Connected ESP8266 sensors to Firebase for real-time data updates and cloud storage.
- Developed a responsive dashboard using Next.js (React framework) for live monitoring and historical insights.

- Used Node.js for backend API routes and automation logic (threshold checks, alert preparation).
- Designed for future integration of smart relays, alerts, and production time logging.
- Supports better compliance with environmental control standards in pharma operations.

**Tech Stack:** ESP8266, DHT11, Firebase Realtime DB, Node.js, Next.js, JavaScript, HTML, CSS, Tailwind CSS

**Link** <https://github.com/fawadeqbal/pharma-environment-monitor>

20/06/2024 – 09/07/2024

**Quiz App – Microservices-Based Quiz Platform**

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- Developed a full-stack quiz platform using Spring Boot microservices and a React/Next.js frontend.
- Designed modular services: auth-service, quiz-service, and question-service, connected via API Gateway and Eureka Server.
- Implemented secure authentication with JWT and service discovery for scalable deployment.
- Built an interactive frontend using React.js (possibly Next.js) with support for quiz-taking, scoring, and result viewing.
- Emphasized RESTful architecture, modular codebase, and clean frontend-backend integration.

**Tech Stack:** Spring Boot, Node.js, React/Next.js, REST API, JWT, Eureka, API Gateway, JavaScript, TypeScript

**Link** <https://github.com/fawadeqbal/quiz-app>

29/05/2024 – 01/06/2024

**Gemini Chatbot – AI Chatbot Using Gemini API**

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- Built a lightweight AI chatbot interface using Gemini API for real-time conversational interaction.
- Developed using React.js with clean UI styling via Tailwind CSS.
- Integrated API calls for dynamic message handling and displayed responses with user-friendly UX.

**Tech Stack:** React.js, Gemini API, JavaScript, Tailwind CSS

**Link** <https://github.com/fawadeqbal/gemini-chatbot-reactjs>

● **EDUCATION AND TRAINING**

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18/09/2021 – 01/08/2025 Abbottabad, Pakistan

**BACHELOR OF SCIENCE IN SOFTWARE ENGINEERING** COMSATS University Islamabad, Abbottabad Campus

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**Website** <https://www.cuiatd.edu.pk/> | **Field of study** Software Engineering | **Final grade** 3.15

● **SKILLS**

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**Frontend**

React.js | Next.js | JavaScript (ES6+) | TypeScript | HTML5 | CSS3 | Tailwind CSS | Bootstrap | Redux | Responsive Design | Framer Motion

**Backend**

Node.js | Express.js | Spring Boot | RESTful APIs | JWT Authentication | MVC Architecture | Error Handling

**Database Management**

MongoDB | MySQL | Mongoose | PostgreSQL | Firebase Realtime Database | Firestore | Database Design | Query Optimization

**Cloud Services & Hosting**

AWS (EC2, S3, Lambda) | Vercel | Netlify | Server Configuration

**Software Testing & QA**

Selenium/WebDriver | JUnit | Framework - TestNG | Unit Testing | Integration Testing | End-to-End Testing | Automated Testing

**AI & Machine Learning Integration**

Python | PyTorch | TensorFlow | OpenCV | Computer Vision | Natural Language Processing (NLP) | Model Evaluation | Data Preprocessing

**DevOps & CI/CD**

Docker | Github, Github actions | CI/CD Pipelines | Linux (Ubuntu) | Bash Scripting | Version Control with Git

**Tools & IDEs**

Visual Studio Code (VS Code) | GIT version control, Linux Command | GitHub | Jira

### CERTIFICATES

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28/04/2024 – 02/07/2024

#### Google Advanced Data Analytics Specialization

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- Completed a 6-month Google specialization via Coursera
- Covered advanced topics in data science and analytics
- Developed hands-on projects using Python, Pandas, and Tableau
- Built regression and machine learning models
- Translated data into insights using visualization and storytelling techniques
- Applied statistical testing, hypothesis analysis, and data ethics principles

**Skills:** Advanced Analytics, Data Analysis, Machine Learning, Regression Analysis, Statistical Hypothesis Testing, Tableau, Data Manipulation, Data Storytelling, Unsupervised Learning, Data Presentation, Data Ethics

**Link** <https://www.coursera.org/account/accomplishments/specialization/certificate/LBDCUGZMX63L>

01/05/2024 – 11/05/2024

#### Image Processing Onramp – MathWorks

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- Completed foundational training in image processing using MATLAB.
- Gained hands-on experience in filtering, enhancement, and transformation techniques.
- Explored real-world applications of image analysis in research and development.

**Link** <https://matlabacademy.mathworks.com/progress/share/certificate.html?id=7a4ab6de-b1db-4a4c-9e62-6b7177393494&>

20/04/2024 – 30/04/2024

#### Introduction to IoT – Cisco

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- Gained foundational knowledge of Internet of Things (IoT) technologies and their role in digital transformation.
- Understood how IoT integrates with emerging technologies such as AI/ML, data analytics, and cybersecurity.
- Learned the significance of Intent-Based Networking for scalable and secure IoT systems.

**Skills:** IoT · Networking · Cybersecurity · AI/ML · Data Analytics

**Link** [https://www.credly.com/badges/3f037d65-39d3-4344-9fb8-dbfef2ab491a/linked\\_in\\_profile](https://www.credly.com/badges/3f037d65-39d3-4344-9fb8-dbfef2ab491a/linked_in_profile)