

Tarek Ferdous

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Summary

Software Engineer with experience across full-stack development, machine learning, and distributed systems. Shipped production systems, co-authored an IEEE paper, and led teams across startups, enterprise projects, and academic-industry collaborations. Currently building independent ventures using disciplined, production-grade agentic development.

Experience

Junior Software Engineer → Team Lead (Project-level)

Together Initiatives (Pvt.) Ltd. — Bangladesh

Nov 2021 – Jul 2022

- Contributed to a production RPA solution (Python, Selenium) automating telecom troubleshooting; handled client Change Requests end-to-end on legacy codebases.
- Built a multi-tenant MERN e-commerce platform (storefront + admin dashboard) with JWT auth and Stripe payments; led the technical demo for a US-based client.
- Owned frontend for a React/Node.js/Spring Boot POS system; **promoted to Team Lead**, managing 2 engineers and coordinating scope with the project manager; later extended it into a React Native (Expo) mobile app.
- Led R&D and a 3-engineer demo team (3-day deadline) for a custom kiosk integration with a BOSCH-authorized security provider, securing project approval through a successful proof-of-concept.

Independent Ventures

Self-Venture Mobile & Web Applications

2024 – Present

- Sole developer building a cross-platform mobile app (iOS/Android) and a separate web application, both using **agentic development with Claude Code** – structured around reusable skills and token-efficient workflows to keep output production-grade rather than AI-generated boilerplate.
- Stack: TypeScript, Kotlin, Objective-C, Fastify, PostgreSQL/PL/pgSQL, Redis, Docker, React Native, JWT, Twilio.
- Own end-to-end technical decisions – architecture, data modeling, and feature prioritization – iterating through regular stakeholder demos.
- Rebuilt personal portfolio website (TypeScript, JavaScript, CSS) using the same disciplined, agentic engineering approach.

Publication

Ambient Assisted Living for Elderly Care and Monitoring in COVID-19 Pandemic – IEEE ICOIAC, 2021. *2nd Author*. Built the end-to-end ML/DL pipeline (IoT ingestion, model evaluation via K-Fold CV, HMM-based anomaly validation); presented at the international conference.

Education

Master of Applied Computer Science – Concordia University, Montreal

Sep 2022 – Dec 2024

GPA: 3.2 / 4.3. Industry-collaborative ML project (NDA, US cybersecurity firm); distributed analytics on OpenSearch.

B.Sc. Computer Science and Engineering – BRAC University, Dhaka

Jan 2017 – Apr 2021

GPA: 3.8 / 4.0. Student Tutor, Discrete Mathematics, for 70–80 students across multiple sections.

Technical Skills

Languages: Python, JavaScript, TypeScript, SQL, PL/pgSQL, Java, Kotlin, Objective-C, Dart, Bash

Web & Mobile: React, React Native, Angular, Node.js, Express.js, Fastify, Spring Boot, Flutter, REST APIs, JWT, Tailwind CSS

ML/Data: Scikit-learn, TensorFlow/Keras, XGBoost, HMM, OpenSearch/Elasticsearch

Databases & Infra: PostgreSQL, MySQL, MongoDB, Docker, Redis

Other: Git, Postman, Claude Code (agentic development), Twilio