Tushar Ibtekar

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Location: Dhaka, Bangladesh

Summary

Software engineer with 4+ years building distributed systems in Go, the last 2.5 years on an industrial IoT platform. Work spans from architecting cloud gRPC services, offline-capable edge services, and high-volume time-series pipelines to building the React/TypeScript frontend end users rely on. Lead a 5-person engineering team and the company's AI transformation.

Experience

Strativ AB Dhaka, Bangladesh
Senior Software Engineer *Apr 2024 – Present*

Alent Dynamic: Multi-tenant IoT platform that monitors and controls 200+ wood-drying kilns at 110+ sawmill sites. Cloud control plane and on-premise edge sites connected over bidirectional gRPC, built to keep running through network outages.

- Build and own Go services on a 30+ service platform: public REST API, internal gRPC gateway, cloud-to-site config sync, kiln process engine, and identity and access control.
- Lead the full frontend: React/TypeScript operator dashboard with live equipment monitoring, real-time WebSocket charts, hierarchical role-based access control (RBAC), and i18n.
- Tuned InfluxDB's WAL flush to stop a host being OOM-killed: memory use **down 80%+ (5–7 GB to under 1 GB)**, and a query that timed out at 20s now returns in **175ms**.
- Architected two-tier InfluxDB downsampling via Flux tasks, cutting slow history queries ~**9x (4.7s to under 500ms)**; restructured the tag model, dropping untyped catch-all writes **from 59% to ~1%**.
- Fixed tunnel saturation in ingestion, reducing telemetry write overhead ~**50x** and stopping dropped readings.
- Moved six Redis Streams consumers to at-least-once delivery and closed a dead-letter path that could lose messages.
- Engineered the on-premise edge service that streams up to **1.5M points/day per kiln** from Redis Streams over WebSocket and sends control commands over Redis Pub/Sub; keeps working when the cloud link drops.
- Built a Parquet archive on Amazon S3 for long-term telemetry (~25 GB/year fleet-wide), with per-customer billing for archive reads; a 4 MB read buffer cut S3 GETs per query **from 804 to 68**.
- Built the Synchronization Handler that coordinates a site's kilns from the cloud, and designed the event-driven cloud-to-edge state sync behind it, since reused across the platform.
- Work directly with Swedish engineers and stakeholders as a core part of technical decision-making.

Spring Rain Software Ltd. Dhaka, Bangladesh
Software Engineer *Jan 2024 – Mar 2024*

- Built five Node.js/TypeScript microservices on Azure Functions and Cosmos DB for Turf Forensics, which uses real-time weather data to predict golf-turf conditions and recommend treatments; also built its React frontend.

Brain Station 23 Dhaka, Bangladesh
Associate Software Engineer *Nov 2021 – Nov 2022*

- Built features for TimeTackle, a time-management web app and Chrome extension, in React/TypeScript; migrated state management to Redux Toolkit and set up a testing pipeline that cut manual testing by ~20%.

Dast Inc. Remote
Frontend Developer *Jan 2021 – Jun 2021*

- Built an online exam system in Angular.

Skills

Languages: **Go**, **TypeScript**, JavaScript, SQL, Python
Backend: **gRPC/Protobuf**, REST, WebSocket, Node.js, Express
Data: **PostgreSQL**, **Redis** (Streams, Pub/Sub), **InfluxDB**, MongoDB, Parquet, Amazon S3
Frontend: **React**, Next.js, Zustand, Redux Toolkit, TanStack Query, Vite
Infrastructure: AWS, Terraform, Docker, CI/CD, Grafana, Prometheus, Loki

Education

BSc in Computer Science & Engineering, Rajshahi University of Engineering and Technology *2018 – 2023*