


M. Shaharyar — Full-Stack Product Engineer

I build creative platforms: real-time collaboration, semantic intelligence, world-class UX.

 Pakistan — Remote Worldwide

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Core Strengths

- **Distributed systems:** realtime sync, offline-first, conflict resolution
- **AI-augmented content tech:** embeddings, ranking systems, NLP pipelines
- **End-to-end product engineering:** architecture → UI/UX → deployment
- **Rust performance + TypeScript developer experience**

Featured Work

Founder & Lead Engineer — Novus Atlas (NOVA)

Full creative platform — multiplayer writing, AI quality engine, semantic discovery

100k+ LOC | Solo built | Production beta

- Architected a real-time collaborative editor using OT with offline merge and granular presence.
- Designed a semantic discovery engine using Rust embeddings + vector DBs.
- Built Nexus: a writer-focused knowledge graph with semantic relationships.
- Implemented branch-based versioning (Git for fiction).
- Conducted accessibility-driven UX design for immersive reading.
- *Key impact: Unified writing, editing, worldbuilding, and publishing experience*

Creator — OpenOT

Operational Transformation engine powering real-time editors

Open source | Integration kits for Lexical/React

- Pluggable transport/storage: WebSockets, SSE, Redis, Durable Objects.
- State-machine based transformation logic.
- Data-agnostic: text + structured nodes.
- *Key impact: Google-Docs-grade collaboration for any editor stack*

Voice Activity Detection (Rust → WASM)

Noise-resistant VAD pipeline using Mel spectrograms

- DSP: FFT + spectral smoothing heuristics.
- Browser-compatible design (WASM planned).

Technical Skills

- **Languages:** TypeScript, Rust, Python, SQL
- **Frameworks:** Next.js, React, Hono, Node.js, Electron
- **Databases:** PostgreSQL, Qdrant, Redis, MySQL
- **Specialties:** Real-time infra, NLP & embeddings, high-performance UI/UX

Publications

- NOVA Design Philosophy
- A Technical Introspect into the Quality Checker