DHVANI BHESANIYA
SOFTWARE DEVELOPER

Ahmedabad, India

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SUMMARY

Backend Developer with hands-on experience building and maintaining infrastructure-critical systems using Rust (Axum, Actix) and Node.js. Core contributor to a company-wide infra tech team, developing scalable APIs and services across multiple projects. Skilled in Kafka, Docker, GitHub, MongoDB, TiKV, and the ELK stack. Strong understanding of distributed systems, backend architecture, and writing clean, efficient, production-grade code.

SKILLS

Programming Languages: Rust, Python, JavaScript
Backend Development: Node.js, Axum, Napi, Tokio, Polars
Databases & Storage: TiKV, Couchbase, Elasticsearch (ELK Stack), MongoDB, SQL, MinIO
Frontend Development: React.js, Next.js, HTML, CSS, JavaScript
DevOps & Tools: Docker, Kubernetes, GitHub, CI/CD (basic), Kafka

EDUCATION

B.Tech in Information Technology   2020 – 2024
RK University, Rajkot   *CGPA: 8.56 / 10*

EXPERIENCE

Software Engineer   June 2025 – Present
Inventyv Software Pvt. Ltd., Ahmedabad, India

– Spearheaded backend architecture for critical infrastructure services using Rust (Axum) and Node.js, ensuring 99.9% availability.
– Architected and maintained `inventyv_datalayer_lib`, a core library unifying drivers for TiKV, Kafka, MinIO Elasticsearch, and Couchbase, reducing microservice boilerplate by 40%.
– Engineered high-performance data pipelines using Rust and Polars, processing **9M records in under 6 seconds** (previously minutes) and cutting resource usage by half.
– Designed fault-tolerant, multi-threaded worker systems consuming high-throughput Kafka topics for asynchronous data synchronization and consistency.
– Mentored junior developers on Rust idioms, memory safety, and concurrency models; established strict code review standards to maintain high code quality.

Junior Software Engineer   June 2024 – June 2025
Inventyv Software Pvt. Ltd., Ahmedabad, India

– Served as a core contributor to the company's unified Data Access Layer (DAL), preventing vendor lock-in by enabling seamless database switches via configuration.
– Developed a high-speed gRPC replication service for cluster-to-cluster data migration, ensuring zero data loss during active-active failovers.
– Solved complex distributed system challenges including eventual consistency (Distributed systems like failovers), and Learned about idempotent message processing.
– Collaborated with teams to simplify infra setup and onboarding via reusable abstractions, improving delivery speed and maintainability.

Software Developer Intern   December 2023 – June 2024
Inventyv Software Pvt. Ltd., Ahmedabad, India

– Developed efficient RESTful APIs using Rust (Axum) and gained hands-on experience with the company's tech stack, including Docker, Kafka, and CI/CD pipelines.
– Contributed to the backend of the Software Update Manager System (SUMS), assisting in the implementation of version control, audit logging, and secure file handling.
– Collaborated with the team to understand database interactions (TiKV, Elasticsearch) and adopted professional workflows using GitHub and Agile methodology.
– Gained deep proficiency in Rust ownership models, trait systems, and async programming in a fast-paced agile environment.

PROJECTS

Inventyv DataLayer Library | *Rust, Napi, Node.js, TiKV, Couchbase, Elasticsearch, MinIO, Kafka, Docker*
- Designed the standard infrastructure library for the organization, unifying access to TiKV, Kafka, MinIO, Elasticsearch, and Couchbase.
- Leveraged **napi.rs** to compile Rust core logic into native Node.js addons, via docker and GitHub workflows handeling.
- Implemented advanced features like automatic retries, data comparison, and data history management via Configuration Management.
- Drastically reduced per-project setup time and improved system reliability by enforcing consistent configuration patterns.

Task Assigner Service (v2) | *Rust, Axum, Tokio, Channels, Event-Driven Systems*
- Re-engineered a legacy Node.js task distributor into a high-performance Rust service, handling **5x greater load** with lower latency.
- Utilized **std channels** and **Arc⟨Mutex⟩** for thread-safe state management and event-driven processing of thousands of requests per second.
- Orchestrated complex routing logic for customer tasks (calls, leads) based on real-time agent availability and skill sets.
- Deployed in production for critical sales and support workflows, ensuring 100% accurate task distribution.

Data Replication Service | *Rust, gRPC, TiKV, Kafka, Axum, Docker*
- Built a resilience-first replication tool using gRPC streaming for real-time, bi-directional verification of data chunks.
- Leveraged **Kafka** for reliable message queueing and **TiKV** for distributed transactional storage.
- Implemented sophisticated error handling and back-pressure mechanisms to survive network partitions and high load spikes.

Software Update Manager (SUMS) | *Rust, Axum, Tokio, TiKV, Elasticsearch*
- Developed a centralized software lifecycle management platform as my first major internship project, where I mastered Rust and backend fundamentals to deliver a production-grade automation tool.
- Designed a scheduler-driven engine that periodically audits software versions, applying newly acquired knowledge of concurrent systems.
- Implemented fine-grained control for Ops teams to approve/reject updates, translating complex business requirements into robust tech solutions.
- Integrated Elasticsearch to provide instant query capabilities, marking my first successful implementation of scalable search infrastructure.

Kira AI — Local Voice & LLM Assistant (CLI) | *Rust, Mistral, Vosk, ONNX, Audio, Linux*   *Personal Project*
- Developed **Kira**, a privacy-focused local AI assistant CLI, integrating LLM, STT, and TTS without cloud dependencies.
- Embedded **Mistral-7B (GGUF)** for on-device inference and **Vosk/Kokoro-Tiny** for real-time voice interaction.
- Wrote custom FFI bindings to interface Rust with C++ audio libraries and ONNX runtimes for maximum performance.
- Architected a modular system with hot-swappable components for Voice, LLM, and Config management.
- Optimized for Linux environments, managing native dependencies (ALSA, OpenSSL) via custom build scripts.

ACHIEVEMENTS

- **Certified in Java (Coding Ninjas):** Mastered OOP principles, data structures, and backend fundamentals through rigorous project-based assessments.

- **Certified in React (HackerRank):** Validated frontend proficiency and component lifecycle knowledge through timed coding challenges.

- **Competitive Programming:** Solved 100+ algorithmic problems on LeetCode, demonstrating strong consistency in data structures and logic optimization.