

Tushar Jha

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EXPERIENCE

Grant Thornton Bharat LLP
Software Developer

Jun 2024 – Present
📍 [Gurugram, India](#)

NorthEast Task Governance Hub

- Designed and implemented a Version-Controlled Task Governance Platform, successfully migrating ~500 officials from a manual PDF workflow to a fully asynchronous and collaborative digital environment, reducing review cycles by ~65%
- Developed a robust concurrency control system with node-level versioning and a custom merge-conflict resolution workflow, allowing multiple editors and reviewers to work in parallel without data loss.
- Enhanced the system to support Event-Sourced architecture using TimescaleDB to handle data at scale, providing a tamper-evident audit trail and enabling full node-level diffs for reviewers.
- Built a dynamic, recursive Vue.js UI to manage complex hierarchical action items, featuring role-based access controls, multi-level approval chains, and inline rich-text editing capabilities.

DPR Analyzer — RAG-based Policy Intelligence System

- Architected a RAG system to query 800–1000 page PDFs with enforced citation grounding, replacing manual review workflows.
- Added a document retrieval pipeline using OpenAI Assistants (File Search) + vector embeddings + JSON function-calling to return structured compliance summaries.
- Designed a consent-gated external search with retry/backoff and streaming chat updates while isolating external results from DPR-grounded context.
- Created a checklist analyzer with traffic-light compliance scoring, status chips, and ministry-branded export workflows.
- Reduced DPR review cycles from 3–5 days to a few hours, and per-query lookup time from ~2 hours to <10 minutes (achieving ~85–90% reduction).

WADI FieldReach — Offline-Capable Field Data Platform

- Pioneered a secure field data system enrolling ~1.9 lakh farmers across 4 states with 25+ parameters captured per entity using Aadhaar-based authentication.
- Configured S3 bucket encryption using AWS KMS with envelope encryption patterns, implementing IAM-based access controls to protect sensitive training evidence and images.
- Developed a weekly batch ETL pipeline processing 75,000 farmer records into Elasticsearch (8,000 docs/hour), using optimized index mappings for LCD codes, crop types, and demographics—achieving <500ms p95 query latency for incremental updates (5,000–10,000 farmers/week) and enabling real-time analytics dashboards with multi-dimensional filters (geography, demographics, crop type) for leadership to track training adoption, profit deltas, and water-savings metrics across 1,000 field agents.
- Reduced registration time by 25–40% and cut data-entry errors by >60% through guided input flows and validation logic.

Selected Government Engagements: **Ministry of DoNER, Krishi Bhavan, National Horticulture Board, National Bee Board, AHIDF**

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Software Development Intern

Sep 2023 – May 2024

📍 [Bangalore, India](#)

- Created a dynamic campaign tagging system used across 300K+ campaigns, improving searchability and segmentation.

- Upgraded the WhatsApp automation pipeline with fuzzy keyword matching, boosting correct auto-responses and cutting manual agent work by nearly 70%.
- Revamped variant-accurate email template rendering across 5M+ transactional emails using Shopify API & GraphQL.
- Reduced Shopify automation failures by ~90% via idempotent event handling, cursor tracking, and load-tested ingestion flows.
- Transformed our real-time analytics dashboards and resolved ~300 PO incidents across ~15 microservices with <24h turnaround.

EDUCATION

B.Tech, Computer Science and Engineering
CGPA: 9.18/10 Aug 2019 – Jun 2023
Maharaja Agrasen Institute of Technology

PROJECTS

Major Project – Efficient Prediction and Analysis of Monkeypox Skin Lesion

- Researched image classification techniques for monkeypox diagnosis, utilizing CNN models (ResNet50, MobileNetV2, InceptionV3, EfficientNetB3) with data augmentation to improve accuracy.
- Built a web-based GUI enabling automated skin lesion analysis through image uploads.
- Presented the work at DELCON, and the research paper was published in **IEEE** (May 2023): [IEEE Xplore Link](#).

SKILLS

Languages: C/C++, Ruby, Python, JavaScript, HTML, CSS, TypeScript, Java,

Framework: Ruby on Rails, Vue.js, Express, Node.js, Flask

Data and Infra: SQL, Redis, Elasticsearch, Kafka, Amazon S3, MongoDB

CS Core: Data Structures and Algorithms, Operating Systems, Computer Networks, Object Oriented Programming (OOP), Database Management System (DBMS)

AI / ML: Retrieval-Augmented Generation (RAG), Vector Embeddings, Whisper, OCR

Tooling and DevOps: Git, Docker, CI/CD Pipeline, Jenkins, AWS

Testing: Jest, RSpec, Factory Bot

Misc.: Agile Software Development, SPA and SSR pattern, Event-Sourcing Patterns,