

Ashish Kr Jha

Software Engineer

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PROFESSIONAL EXPERIENCE

Cloud Rank Pvt. Ltd., Senior Consultant

04/2023 – Present | Remote

- Develop and ship features for a production TypeScript/React application used daily across **11 global markets**, comprising approximately **185 screens**, Redux Toolkit state management, and multilingual support from a shared codebase.
- Maintain the application's data-access layer, including request chunking around platform query limits, parallel request orchestration, timeout handling, retries, and independent request-state management.
- Built internal engineering tooling using the **TypeScript** Compiler API to make a **500+ file codebase** queryable for imports, JSX component trees, **Redux** data flow, and call graphs, replacing whole-repository reads with targeted structural queries for impact analysis and AI-assisted development.
- Built React clients for enterprise **AI assistants** supporting asynchronous execution, polling, cancellation, retry logic, response normalization, and compatibility across browser and tablet runtimes.
- Built a scheduled **Node.js** pipeline that extracts and filters platform schema using an allowlist, then publishes a schema artifact consumed at runtime by an **LLM tool-calling agent** to construct valid queries against live enterprise data.
- Designed and established foundations for secure enterprise **AI workflows**, including server-side LLM execution, structured outputs, approval gates, auditability, rollback protection, and compliance-aware boundaries.
- Worked directly with global stakeholders to gather requirements, estimate work, communicate technical solutions, and deliver production releases across multiple concurrent projects.
- Mentored junior developers through code reviews, technical guidance, debugging sessions, and architecture discussions.

Freelance Software Developer

11/2021 – 03/2023 | Guwahati

- Developed custom web applications and academic projects using JavaScript, React, and REST APIs.
- Collaborated with engineering students to design, implement, and deliver full-stack applications while managing milestones and technical planning.
- Researched and evaluated emerging technologies to improve project architecture and implementation quality.

PROJECTS

LLM Agent Platform — Enterprise Data Assistant (Working POC)

- Built a chat assistant grounded in live enterprise data using **Gemini function-calling**: the model requests typed tools (list objects, fetch schema, query records), the client resolves them in parallel and loops under a hop cap, so responses come from real schema and records rather than model memory
- Built the **Node.js schema pipeline** feeding it — scheduled extract, allowlist filtering of system and audit fields, published as a versioned artifact the agent reads at runtime to construct valid queries
- Developed **React clients over an asynchronous agent API**: execute→poll orchestration with backoff, cancellation, retries, idempotent execution via unique external IDs, session invalidation and recovery, and response normalization across web and tablet runtimes

Enterprise Survey Platform

- Built a React-based survey platform integrated with enterprise CRM data, replacing a third-party solution and reducing annual licensing costs by approximately **\$27,000**.
- Designed dynamic questionnaires driven by therapeutic area, country, product, and compliance rules.
- Developed administrative tools enabling business users to configure surveys without code deployment.
- Supported **400+ field representatives** across **4 continents**.

Secure AI Automation — Governed Write Operations, (design + deployed foundation)

- Moved LLM execution **server-side** after a client-direct prototype proved unsuitable for regulated data — API credentials and orchestration behind the platform's own auth layer
- Prompt-injection sandbox: intent parsing runs with *no tools declared* and a locked response schema, so instructions embedded in untrusted ticket text cannot invoke actions; execution is deterministic code from that point
- Governed mutation pipeline: dry-run diff, two-surface approval, state-hash drift check at execute time to close the TOCTOU window, savepoint rollback, and per-action blast-radius caps
- Immutable audit trail with encryption on sensitive fields, designed against regulated-industry retention and traceability requirements

ADDITIONAL EXPERIENCE

Salesforce & Enterprise CRM Engineering

- Configured and customized enterprise CRM solutions across sales, medical, and analytics workflows.
- Built integrations with external systems using REST APIs.
- Developed production reporting solutions, interactive dashboards, and field applications.
- Supported production deployments, issue resolution, and stakeholder communication across multiple global clients.

SKILLS

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|-----------------------------|--------------|-----------------|----------------------|
| • TypeScript | • React | • Redux Toolkit | • Node.js |
| • REST APIs | • PostgreSQL | • Git | • AI Agent Workflows |
| • Enterprise AI Integration | | | |

EDUCATION

Bachelor of Technology, Girijananda Chowdhury Institute of Management and Technology

2021 | Guwahati