

Ashreeta Patra

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EDUCATION

ITER, Siksha O Anusandhan (Deemed to be University)

BTech in Computer Science and Engineering, Specialisation in AI & ML

Bhubaneswar, Odisha

Nov. 2022 – Aug. 2026

EXPERIENCE

The Desk – Zoho Partner

Dec. 2025 – Present

Full-Stack Developer

- Build and maintain Zoho CRM integrations, custom modules, and cross-platform workflows for **7+** client businesses, automating **80%** of manual processes and cutting turnaround time by roughly **50%**.
- Design and implement automation pipelines using n8n, Zoho Flow, and scripted workflows to eliminate repetitive manual operations.
- Architected and deployed a production AI agent using OpenClaw, Hermes, and Model Context Protocol (MCP) tooling on a multi-agent-ready framework, maintaining **90+ days** of continuous uptime.
- Provisioned and managed VPS instances; developed and shipped **4** client-facing websites from brief to production, maintaining load times **under 2 seconds**.

Freelancer

July 2025 – Dec. 2025

Developer

- Launched a website for **Earth Again**  Movement of Sambad Group with a clean UI and Admin Dashboard; visited by thousands of users, with hundreds of registrations monthly.
- Delivered a full website for **Lifespark Infra** , a real estate brand, driving hundreds of monthly visitors.

Alesa AI Ltd.

April 2025 – Oct. 2025

Full-Stack Intern

- Contributed to full-stack development across **4** real-time production projects.
- Created features end-to-end using Next.js for frontend development and Django for backend development.

PROJECTS

Memonative - Memory Layer for AI Agents  | *Python, FastAPI, PostgreSQL, pgvector, Redis, Celery, Docker*

- Architected a persistent memory system for LLM agents modelling human memory, validated at **81% accuracy** on the 100-question LongMemEval-S benchmark — featuring Ebbinghaus decay, episodic consolidation, reconsolidation, and full revision history with retraction vs. temporal-update distinction.
- Implemented three memory types (semantic, episodic, procedural) with attribute-slot conflict resolution, contradiction detection, and a consensus engine that promotes repeated low-confidence episodics into high-confidence semantic facts.
- Built hybrid retrieval pipeline combining pgvector ANN search and PostgreSQL full-text search fused via Reciprocal Rank Fusion (RRF), achieving **100% Recall@5** and **81% accuracy** on the LongMemEval-S benchmark.
- Exposed an agent-native REST API (FastAPI + asyncpg) with Anthropic and OpenAI tool manifests, multi-tenant auth (SHA-256 hashed bearer tokens), background Celery workers for hourly decay and 4-hourly consolidation.

AI Legal Intent Rewriter  | *Next.js, FastAPI, LegalBERT, Flan-T5, Supabase, HuggingFace, MongoDB*

- Devised a multi-stage NLP pipeline processing **800 spans per batch** that ingests legal documents, segments them into clauses, classifies by intent, extracts named entities, generates plain-language rewrites, and flags risky clauses via a web dashboard.
- Fine-tuned **legal-bert-base-uncased** on the CUAD corpus with a 227-example hand-curated seed set across a 12-category taxonomy; achieved **0.912 accuracy** and **0.915 weighted-F1** on a held-out test set of 419 clauses, exceeding the macro-F1 target of 0.80.
- Fine-tuned **flan-t5-small** on the Plain English Contracts corpus for plain-language rewriting, attaining a validation ROUGE-L of 0.352.
- Two-service architecture (Next.js orchestration + Python FastAPI NLP service) backed by MongoDB as the persistence layer, verified by 34 automated tests.

Brawer 🐉 | *Next.js 16, React 19, Tailwind v4, Node.js WebSocket, Supabase, react-konva*

- Building a real-time multiplayer browser game (2–15 players) where one player describes a cartoon character feature-by-feature while others race to identify and sketch it on a private canvas; all drawings revealed side-by-side at round end.
- Custom Node.js WebSocket server manages real-time game state for up to **15 concurrent lobbies (~50 players)** with average latency **under 100ms**; Supabase persists match history and lobby-code audit trail.
- Drawing canvas powered by **react-konva** and **perfect-freehand**, rendering strokes at **60fps** with sub-**16ms** input latency; wire protocol validated end-to-end with Zod across **20+** automated tests.

TECHNICAL SKILLS

Languages: Java, Python, JavaScript, TypeScript, Deluge, HTML/CSS, SQL

Frameworks: React, Node.js, Next.js, Express.js, Django, FastAPI, Tailwind CSS, Shadcn UI, Framer Motion, Material-UI

Developer Tools: Git, AWS, Fly.io, VS Code, Figma, MongoDB, Supabase, Prisma, n8n, Jira, Zoho Tools

AI & Automation: OpenClaw, Hermes, MCP Tooling, Antigravity, Claude Code, TensorFlow, Scikit-learn, HuggingFace Transformers, LegalBERT, Flan-T5, ArcJet AI

Libraries & Concepts: Pandas, NumPy, Matplotlib, LangChain, Zod, React-Konva, Machine Learning, Deep Learning, Neural Networks