

Anoushka Awasthi

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SKILLS

Languages: Python, TypeScript, JavaScript, C++
Frameworks: React, Next.js, Node.js, Express.js, FastAPI
Databases: PostgreSQL, MySQL, Redis
Cloud & DevOps: AWS (EC2, Lambda, API Gateway, DynamoDB, S3), Docker, Git, GitHub Actions
AI/ML: LLM APIs, RAG pipelines, vector embeddings, semantic search

PROFESSIONAL EXPERIENCE

Research Intern — Samsung PRISM

PyTorch, SpeechLLMs (SALM, Qwen Audio) | Accent Invariant Representation Learning

Remote

Jul 2026 – Present

- Researching **parameter efficient accent adaptation** for multilingual SpeechLLMs. LoRA adapters, MoE dynamic adapter routing, and accent aware front-end encoders to improve ASR/AST robustness on accented speech without full model retraining.
- Benchmarking baseline SpeechLLM pipelines (SALM, Qwen Audio, SALMONN) and running **accent failure analysis** to identify weak accents and adaptation targets.
- Work targets **publication of research findings** in a peer reviewed conference/journal as the closure deliverable.

Software Developer Intern — BharatRohan

React.js, Javascript, OpenLayers

Gurugram, India (Remote)

July 2026 – August 2026

- Developed and enhanced **geospatial web application features** using React.js and OpenLayers.
- Worked with **vector and raster layers**, coordinate reference systems, projections, map interactions, and spatial data visualization.
- Collaborated with the engineering team to navigate and implement **mapping and spatial data workflows** in a production application.

SELECTED PROJECTS

SOP Opera — Agentic Industrial Safety Intelligence Platform (Economic Times AI Hackathon 2.0 Winner)



Python, TypeScript, FastAPI, LangGraph, PostgreSQL/pgvector, Next.js, Docker

- Built a compound risk detection engine combining gas sensor readings, work permits, isolation state, and worker location to catch hazards conventional single sensor thresholds miss, cutting the false negative rate from **44.5% to 0%** across 593 labeled cases and alarming **28 minutes** earlier.
- Designed a **LangGraph multi agent pipeline** with conditional agent fan out and hybrid pgvector/SQL retrieval over a clause level regulatory corpus.
- Built a durable Postgres job queue and a non blocking WebSocket layer with per client backpressure, with a **hash chained tamper evident audit trail** for every recorded safety decision.

FlowSync — AI Project Memory for Coding Agents



TypeScript, Python, AWS (Bedrock, Lambda, DynamoDB, S3), MCP, Next.js

- Designed an AI project memory system using **event driven architecture** to extract decisions, risks, and tasks from git diffs via Bedrock models and persist them for coding agents via MCP.
- Developed a VS Code extension and MCP server for context logging, project search, and branch aware RAG retrieval.
- Implemented **branch aware RAG** with DynamoDB caching, achieving **1.26s median push to search latency** (p95: 1.60s).

Konta — Context-Aware Browsing System (Samsung PRISM Web Agent Hackathon Winner)



TypeScript, React, IndexedDB, Transformers.js, ONNX

- Built a local first Chrome extension that converts browsing activity into an on device knowledge base using **on device semantic embeddings** for private, low latency search.
- Designed a **knowledge graph linking system** connecting pages using semantic, temporal, and contextual relationships.
- Engineered sessionization logic with context boundary detection to prevent unrelated browsing tasks from merging.

GINA — Grounded Insights from Natural Language Analytics



Next.js, TypeScript, Fastify, PostgreSQL, Supabase Auth, SSE

- Built a **multi model natural language to SQL pipeline** for conversational data analytics with structured outputs and grounded query generation.
- Implemented **SSE streaming with fast path routing** using snapshots and cache restoration to reduce response latency across repeated queries.
- Designed **context-aware multi turn query handling** with structured conversation state, semantic schema correction loops, and failure tolerant API/SSE error handling.

ACHIEVEMENTS

1st Place — Economic Times AI Hackathon 2.0 (60,000+ participants, 10,000+ teams, 28 finalists)

Winner — Samsung PRISM Web Agent Hackathon (450+ participants, 120+ teams)

Innovation Award — Agentic AI Hackathon 2025, Ulster University, UK (150+ teams)

EDUCATION

Thapar Institute of Engineering and Technology, Patiala

Bachelor of Technology, Computer Engineering

CGPA: 8.78

2023 – Present

CISCE Board

Class XII

Percentage: 96.5%

2022