

Hitaansh Jain

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Education

New York University

GPA: 3.93/4.0 | BA, Computer Science, Minor: Mathematics

- Courses: Algorithm Problem Solving, Artificial Intelligence, Software Engineering, Probability and Stats, Linear Algebra

New York, NY

Expected May 2027

Professional Experience

Header (joinheader.com)

Seattle, WA

Software Engineer Intern

May 2026 – August 2026

- Shipped full-stack briefing customization to production (per-section reorder, toggles, detail control, and a second-pass LLM-generated TL;DR), refactoring generation from a hardcoded prompt to dynamically assembled blocks on a JSONB layout model.
- Built a multi-phase lifecycle feature across five stacked PRs: schema, state machine, write API, email delivery, an agent-facing API, and the web UI, including a rename migration kept correct for an environment that had already applied the original, and a compare-and-set fix for a read-then-delete race.
- Delivered the briefing formats and history view for Clear Tabs: a submit-time format picker with validated user-written sections, plus a React Native history screen on an authenticated, paginated FastAPI endpoint that also powers the extension's recent-submissions list. Preserved submission metadata ahead of a cleanup hook that soft-deletes the rows the history join needs.
- Wrote 700+ automated tests on a test-per-feature workflow across a multi-provider LLM pipeline, FastAPI/PostgreSQL backend, and React Native/Expo frontend, with every change merged to production through senior engineer review.

MathGPT (mathgpt.ai)

Remote

Software Engineer Intern, AI (Part-Time)

May 2026 – August 2026

- Cut comparable run costs by 39% and runtime from 14.8 to 7.5 minutes via per-stage reasoning budgets and prompt caching, on a five-stage TypeScript/Next.js pipeline turning a calculus problem into a LaTeX case study, flashcards, and a walkthrough.
- Designed a generator/critic verification architecture where the critic re-solves each problem in a fresh context before the generator's drafts exist and halts the run on mismatch, with Zod contracts and validator-error retries on the JSON artifacts and a LaTeX compile gate on the worksheet.
- Owned the corpus extraction system (45 OpenStax sections, 195 learning objectives) and a nine-table MySQL cache, covered by 1,000+ automated tests including negative controls, on a three-intern Agile team.

Vardhman Infotech

Remote

Software Engineer Intern (Part-Time)

December 2024 – May 2025

- Executed a full MySQL-to-Access migration for a Python inventory system serving 1,500+ retail locations to meet the client's offline, zero-infrastructure constraint: a 394-column schema across 19 tables, 700+ queries across 43 files, and a 73-function database layer refactored into a metadata-driven architecture.

Projects

Local RAG Search Platform

July 2025 – December 2025

- Built a fully air-gapped RAG system (FastAPI, Ollama, ChromaDB, React) for on-device semantic search over private documents, stamping source and page provenance into every chunk so citations survive generation.
- Diagnosed ranking flaws in a hybrid vector-plus-keyword retrieval pipeline with a 50-query ground-truth benchmark over 1,070 pages of zoning ordinances, motivating a BM25 redesign of keyword scoring.

VocabLearn

February 2026 – May 2026

- Led backend on a 5-person Agile team, delivering a JWT-authenticated Node.js/Express REST API with 13 endpoints and 21 integration tests, plus Gemini 2.5 Flash with structured JSON output for reverse-dictionary search-by-meaning.
- Engineered a quiz engine with distractor sets drawn from saved definitions and dual-layer deduplication (server-side Map plus client sessionStorage), gating all merges on 21 passing tests via a 3-workflow GitHub Actions pipeline.

Stock Analyzer

April 2026 – June 2026

- Built and deployed a 3-tier stock analysis platform (Docker Compose, Flask, MongoDB) with rate-limit-aware retries for the OpenAI and SEC APIs, an 8-worker job pipeline, and 80% coverage gates in GitHub Actions CI/CD.
- Modeled MongoDB data across 6 collections with upserts ensuring zero data loss across concurrent jobs, and built session-based auth plus a polling job monitor with a live log view.

Swordfight (Unity, C#) | Gameplay & Systems Programmer

September 2023 – May 2024

- Shipped a 14-character top-down fighting game to itch.io on a 10-person student team, drawing 150k page views and 4.5 stars across 111 ratings.
- Owned the polymorphic weapon architecture and HFSM enemy AI behind multi-stage boss fights, and ran the PlasticSCM branch strategy that kept unmergeable Unity scenes conflict-free.

Computer Skills

Languages & Frameworks: Python (FastAPI, Flask), TypeScript (Next.js, React), JavaScript (Node.js, Express, React Native), Java, C#, SQL (PostgreSQL, MySQL), MongoDB

AI & Data Engineering: LLM pipelines (OpenAI API, Ollama, generator/critic verification), RAG (Retrieval-Augmented Generation), LangChain, ChromaDB, Pandas

DevOps & Workflow: Claude Code, Docker, Git, GitHub Actions, Render, CI/CD, Pytest, Vitest, Mocha, Agile/Scrum