

Ishaan Sandhwar

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EXPERIENCE

AI Mentorship Intern | Launched Global × Deevelo X — Remote May 2025 – Jun 2025

- Engineered an NLP capstone (Intelligent Excuse Generator) over a **2-month** mentorship program — natural language generation, context weighting, tone and urgency control, and candidate ranking with text-to-speech synthesis.

PROJECT EXPERIENCE

EDU Revolution — Agentic AI for Benefit Nomination | Python, FastAPI, PyTorch, React Aug 2026 – Present

- Architected and deployed a **5-stage** agentic workflow — OCR/Vision-LLM document parsing, rule validation, semantic course mapping, and a tool-calling agent with role-based access control — behind a FastAPI and React portal, validated by **1,071 tests**.
- Trained a **13-class** document classifier on MiniLM embeddings with hybrid pattern matching, reaching **0.916 macro F1** against a **0.394** keyword baseline, and holding **0.866** under **5%** synthetic OCR noise.
- Fine-tuned a dense bi-encoder with hard-negative mining — **+0.454 MRR** over TF-IDF, **+0.133 Precision@1**; benchmarked a cross-encoder reranker, measured no held-out transfer (separation **-0.037**), and shipped it disabled.

Product Intelligence Engine — Catalog Enrichment | Python, LLMs, RAG | Live Demo, GitHub Aug 2026

- Constructed an ETL and catalog enrichment pipeline turning a part number and a **35-character** description into a **252-attribute** structured schema across **1,000 SKUs**.
- Optimized throughput to **1,000 records in 7 seconds** with deterministic preprocessing — shorthand parsing, unit normalization and entity resolution — ahead of every LLM call.
- Boosted attribute accuracy from **51.2 to 78.3 (+27.1 points)** at **97%** fill rate and **100%** schema coverage, using Retrieval-Augmented Generation (RAG) over a knowledge graph with LLM-as-a-judge scoring.

LifeLine — Disaster Response Simulator | C++17, React, REST API, Docker | Live Demo, GitHub Jul 2026

Five-person team project

- Hand-wrote data structures from scratch (Min/Max Heaps, Disjoint Set Union, Tries, Hash Tables) and **10+** graph algorithms on them — Dijkstra, A*, Bellman-Ford, Floyd-Warshall, Edmonds-Karp max-flow/min-cut, Tarjan's bridge-finding.
- Built a C++17 backend over a **40-node, 83-edge** road network, serving REST endpoints and bundling a React frontend into a Dockerized binary.
- Decreased search space by **66%** with an admissible Haversine heuristic, verified across **96 test suites** spanning **1,600 node pairs**.

TRAINING

DSA Placement Bootcamp: Master Data Structures & Algorithms for Industry Jun 2026 – Jul 2026

Centre for Professional Enhancement, Lovely Professional University

- Implemented data structure and algorithm solutions in C++ throughout a **7-week** industry-oriented technical curriculum.
- Earned **Grade O (90%+)** across the program's coding evaluations and timed technical assessments.

CERTIFICATIONS

Database Management | Infosys Springboard Jul 2026

Oracle Data Platform Certified Foundations Associate | Oracle May 2026

Oracle Cloud Infrastructure Certified AI Foundations Associate | Oracle Nov 2025

ACHIEVEMENTS

Pre-Finalist, Algo Arena 2.0 — competitive programming contest | WelInnova8 on TheEduCode Apr 2026

Top 30 Finalist, CodeXtreme 4.0 — algorithmic Java programming evaluation | LPU and iamneo Mar 2026

TECHNICAL SKILLS

Languages: Python, C++17, C, SQL, TypeScript

Machine Learning: PyTorch, scikit-learn, CUDA, NumPy, Pandas, Matplotlib, imbalanced-learn, SMOTE, LIME, SHAP, RAG, Sentence Transformers

Tools/Frameworks: Git, GitHub, Linux (Ubuntu), Docker, Render, FastAPI, REST APIs, Streamlit, React, SQLite, MySQL, Oracle Cloud

Soft Skills: Problem Solving, Team Collaboration, Communication, Adaptability

EDUCATION

Lovely Professional University Phagwara, Punjab

Bachelor of Technology, Computer Science and Engineering (AI & ML); **CGPA: 7.86** Aug 2024 – Expected 2028

Narayana E-Techno School Mumbai, Maharashtra

Senior Secondary (Class XII), Science; **Score: 70%** Apr 2023 – May 2024

Divine Child Senior Secondary School Mumbai, Maharashtra

Secondary (Class X); **Score: 85%** Apr 2021 – Mar 2022