

# Ishaan Sandhwar

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## 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                                                        |

## EXPERIENCE

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| AI Mentorship Intern   Launched Global × Deevelo X — Remote                                                                                                                                                                                                                         | May 2025 – Jun 2025 |
| <ul style="list-style-type: none"><li>Engineered an NLP capstone (Intelligent Excuse Generator) over a <b>2-month</b> mentorship program — natural language generation, context weighting, tone and urgency control, and candidate ranking with text-to-speech synthesis.</li></ul> |                     |

## PROJECT EXPERIENCE

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| EDU Revolution — Agentic AI for Benefit Nomination   Python, FastAPI, PyTorch, React                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | Aug 2026 – Present |
| <ul style="list-style-type: none"><li>Architected and deployed a <b>5-stage</b> 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 <b>1,071 tests</b>.</li><li>Trained a <b>13-class</b> document classifier on MiniLM embeddings with hybrid pattern matching, reaching <b>0.916 macro F1</b> against a <b>0.394</b> keyword baseline, and holding <b>0.866</b> under <b>5%</b> synthetic OCR noise.</li><li>Fine-tuned a dense bi-encoder with hard-negative mining — <b>+0.454 MRR</b> over TF-IDF, <b>+0.133 Precision@1</b>; benchmarked a cross-encoder reranker, measured no held-out transfer (separation <b>-0.037</b>), and shipped it disabled.</li></ul> |                    |

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| Product Intelligence Engine — Catalog Enrichment   Python, LLMs, RAG   Live Demo, GitHub                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Aug 2026 |
| <ul style="list-style-type: none"><li>Constructed an ETL and catalog enrichment pipeline turning a part number and a <b>35-character</b> description into a <b>252-attribute</b> structured schema across <b>1,000 SKUs</b>.</li><li>Optimized throughput to <b>1,000 records in 7 seconds</b> with deterministic preprocessing — shorthand parsing, unit normalization and entity resolution — ahead of every LLM call.</li><li>Boosted attribute accuracy from <b>51.2 to 78.3 (+27.1 points)</b> at <b>97%</b> fill rate and <b>100%</b> schema coverage, using Retrieval-Augmented Generation (RAG) over a knowledge graph with LLM-as-a-judge scoring.</li></ul> |          |

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| LifeLine — Disaster Response Simulator   C++17, React, REST API, Docker   Live Demo, GitHub                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Jul 2026 |
| Five-person team project                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |          |
| <ul style="list-style-type: none"><li>Hand-wrote data structures from scratch (Min/Max Heaps, Disjoint Set Union, Tries, Hash Tables) and <b>10+</b> graph algorithms on them — Dijkstra, A*, Bellman-Ford, Floyd-Warshall, Edmonds-Karp max-flow/min-cut, Tarjan's bridge-finding.</li><li>Built a C++17 backend over a <b>40-node, 83-edge</b> road network, serving REST endpoints and bundling a React frontend into a Dockerized binary.</li><li>Decreased search space by <b>66%</b> with an admissible Haversine heuristic, verified across <b>96 test suites</b> spanning <b>1,600 node pairs</b>.</li></ul> |          |

## TRAINING

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| DSA Placement Bootcamp: Master Data Structures & Algorithms for Industry                                                                                                                                                                                                                   | Jun 2026 – Jul 2026 |
| Centre for Professional Enhancement, Lovely Professional University                                                                                                                                                                                                                        |                     |
| <ul style="list-style-type: none"><li>Implemented data structure and algorithm solutions in C++ throughout a <b>7-week</b> industry-oriented technical curriculum.</li><li>Earned <b>Grade O (90%+)</b> across the program's coding evaluations and timed technical assessments.</li></ul> |                     |

## CERTIFICATIONS

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|-------------------------------------------------------------------------|----------|
| 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

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|--------------------------------------------------------------------------------------------|----------|
| Pre-Finalist, Algo Arena 2.0 — competitive programming contest   WeInnova8 on TheEduCode   | Apr 2026 |
| Top 30 Finalist, CodeXtreme 4.0 — algorithmic Java programming evaluation   LPU and iamneo | Mar 2026 |

## EDUCATION

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|--------------------------------------------------------------------------------|--------------------------|
| Lovely Professional University                                                 | Phagwara, Punjab         |
| Bachelor of Technology, Computer Science and Engineering (AI & ML); CGPA: 7.82 | 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      |