ABHISHEK KUMAR MISHRA

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SKILLS

- **Languages:** C++, Java, JavaScript, SQL
- **Backend & Database:** Node.js, Supabase, Authentication, Database Design, Caching
- **Web Technologies:** HTML5, React, Next.js 14
- **Developer Tools:** Git, GitHub, VS Code
- **Soft Skills:** Problem-Solving, Teamwork, Communication, Adaptability

EDUCATION

Lovely Professional University — Phagwara, Punjab
Bachelor of Technology in Computer Science and Engineering — CGPA: 8.2/10 — Aug 2023 – Present
Relevant Coursework: Data Structures & Algorithms, DBMS, Operating Systems, OOP, Computer Networks

WORK EXPERIENCE

Freelance Software Developer — E-Commerce Platform — Apr 2025 – Aug 2025

- Designed and implemented secure backend workflows for product, order, and pricing management using server-side APIs (Next.js) and Supabase.
- Built dynamic pricing logic that updated product rates automatically, reducing manual updates and errors by $\sim 60\%$.
- Added authentication, role-based access, and database indexing to improve reliability and response times.
- Optimized API and database queries, resulting in 30% faster load time and 45% higher user engagement.

PROJECTS

AgniDB — Crash-Safe B-Tree Database Engine | GitHub — Sep 2025 – Present

- Built a persistent, disk-backed B-Tree database engine in C++20 with crash-safe recovery and full data integrity across restarts.
- Designed a fixed-page storage layer with LRU caching and dirty-page tracking, reducing disk I/O by $\sim 90\%$.
- Implemented robust B-Tree rebalancing (split, merge, sibling-borrow) with correct persistence and validation.
- Developed a persistent freelist with corruption detection for safe page reuse and improved space utilization.
- Added tools for tree inspection (.btree) and integrity verification (.validate) to support debugging and correctness checks.
- **Tech:** C++20, B-Tree, LRU Cache, File I/O, Persistence, Validation

Giffy Duck – AI-Powered Notes Assistant | GitHub | Live — Jan 2025 – Mar 2025

- Built an AI-powered notes platform enabling content generation, refinement, and organization for students and creators.
- Designed normalized database schema and added indexes, improving search latency by 45% and reducing duplicate records.
- Implemented secure user authentication and role-based access to protect notes and AI-assisted content.
- Reduced backend complexity by modularizing services and applying clean OOP patterns, simplifying feature additions.
- Increased average session duration by 50% through performance tuning and reliability improvements across APIs.
- **Tech:** Next.js, Node.js, Supabase, REST APIs, Auth, OOP

TRAINING

Machine Learning with Data Science – Cipher Schools — May 2025 – Jul 2025

- Applied ML models with emphasis on data pipelines, evaluation metrics, and reproducibility.
- Gained hands-on experience in supervised/unsupervised learning, feature engineering, and model evaluation techniques.

CERTIFICATIONS

- **Introduction to Machine Learning** – NPTEL — Sep 2025
- **Oracle Cloud Infrastructure 2025 Certified Generative AI Professional** – Oracle — Sep 2025
- **Oracle Cloud Infrastructure 2025 Certified Data Science Professional** – Oracle — Aug 2025

ACHIEVEMENTS

- **Solved 400+ DSA Problems:** Solved 400+ DSA problems across LeetCode and GfG, strengthening algorithmic thinking and coding efficiency.
- Built and delivered 3 production-ready software projects with measurable performance and usability improvements.