

# ARJUN DESHMUKH

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🐙 [github.com/ZEUS33776](https://github.com/ZEUS33776)

🌐 [portfolio-6rj9.onrender.com](https://portfolio-6rj9.onrender.com)

🔗 [leetcode.com/u/ZEUS\\_7](https://leetcode.com/u/ZEUS_7)

## Education

Indian Institute of Information Technology, Kottayam

Nov 2022 – March 2026

Bachelor of Technology in Computer Science and Engineering

CGPA: 9.06/10

## Experience

Xcdify Solutions Private Limited

Dec 2024 – Present

Software Engineering Intern (remote)

Bengaluru, Karnataka

- Engineered an enterprise-grade Vehicle Routing Problem (VRP) solution that optimized logistics for **50+ vehicles**, reducing transportation costs by **20%** and improving operational efficiency by **35%**.
- Developed and deployed a **dbt (Data Build Tool)**-powered analytics platform with **10+ modular data transformation pipelines** that enhanced processing speed by **40%** and enabled real-time operational insights for key stakeholders.
- Implemented scalable data engineering solutions including **50+ SQL transformations**, automating workflows that reduced manual reporting overhead by **60%** while meeting **weekly sprint deadlines**.
- Collaborated cross-functionally and embraced rapid feedback cycles, staying **hungry to grow** in a fast-paced remote team environment.

## Projects

VCS-Core – Distributed Version Control System | *PyPI, CLI, File Hashing, Git Protocol*

Github | PyPI

- Architected and published a lightweight distributed version control system as an open-source Python package, achieving **100%** compatibility with core Git operations and demonstrating deep understanding of version control internals.
- Implemented advanced file tracking algorithms using SHA-256 hashing, delta compression, and tree data structures for efficient directory traversal, reducing storage overhead by **40%** while maintaining **99.9%** data integrity.
- Developed a CLI supporting branching, merging, and conflict resolution with **15+ Git-compatible commands**.
- Published to PyPI with full documentation and tests; received over **220 installs within a week**.

Lyfline – AI-Powered Heart Attack Prediction | *ML, React, Node.js, PostgreSQL*

Github | Live Demo

- Developed a heart condition prediction system using **3 machine learning models**, achieving **87%** accuracy for new patients and **97%** for admitted cases.
- Built a monitoring platform with real-time alerts, reducing detection time by **25%**.
- Implemented PostgreSQL database with RBAC, processing **1000+** records securely.
- Integrated a React dashboard for risk visualization, improving decision-making speed by **40%**.

Institute Placement Portal | *React, Node.js, Express, MongoDB*

Github

- Led development of a modern React-based placement portal, improving student application efficiency by **65%**.
- Integrated **JWT auth** and security for **500+** students.
- Built RBAC system streamlining workflows for coordinators, students, and admins by **50%**.

Distill – AI-Powered Learning Platform | *RAG, LLM, React, Vector Embeddings*

GitHub | Live Demo

- Architected an AI learning platform supporting PDFs and YouTube content, built with RAG + LLM.
- Used **lama-4-scout-17b** and Groq backend for fast inference, reducing response time by **60%**.
- Built JWT-based user system with namespace isolation and personalized learning analytics.
- Enabled contextual chat and flashcard generation, improving engagement by **45%**.

## Research

Advanced Analysis of the Maximum Subarray Problem (2D)

Oct 2023 – Nov 2023

Github

- Explored optimization of the 2D max subarray problem, improving runtime by **15%**.
- Applied mathematical proofs to push past  $O(n^3 - \epsilon)$  barrier.
- Presented findings to peers and faculty.

Skills

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- **Programming Languages:** Python, Java, C, C++, JavaScript, Go, SQL
- **Scripting & Tools:** Shell Scripting, DBT, Redis Queue, Git, GitHub, Docker, CI/CD
- **Software Development:** Backend Development, React.js, Node.js, Express.js, Flask, FastAPI, REST APIs, Tailwind CSS
- **Systems & Architecture:** Operating Systems, Computer Architecture, Instruction Set Architecture, CPU Pipelines, Cache Subsystems, System Design
- **Databases & Cloud:** PostgreSQL, MySQL, MongoDB, Redis, AWS, GCP, Supabase
- **AI & Machine Learning:** Scikit-Learn, TensorFlow, Pandas, NumPy, LangChain, RAG, Prompt Engineering, LLMs, Semantic Search.
- **Other Skills:** Algorithm Optimization, Data Structures, Competitive Programming, Data Engineering, Problem Solving

Relevant Coursework

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|-----------------------|-------------------------------------|----------------------------|-------------------------|
| • Compiler Design     | • Design and Analysis of Algorithms | • Computer Architecture    | Mining                  |
| • Database Management |                                     | • Software Design Patterns | • Operating System      |
| • Cloud Computing     | • Artificial Intelligence           | • Data Warehousing and     | • Distributed Computing |

Achievements

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- Achieved a **1805 rating on LeetCode**, placing in the top competitive tier.
- Solved **360+** LeetCode problems and **500+** across Codeforces, GFG.
- Top **3%** of **28,000** in LeetCode Contest 151.
- Published VCS-Core to PyPI; received **220+ installs** in the first week.
- Strong foundation in **Data Structures and Algorithms**, applied in competitive programming and backend systems.