

# NUZELLA PRABHAKARA SANJAY

## Aspiring Software Engineer

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### SUMMARY

Third-year engineering student at Vellore Institute of Technology with a strong foundation in C++, Data Structures & Algorithms, Object-Oriented Programming, and Web Development. Proficient in Python, SQL, and DBMS, with familiarity in Generative AI technologies. Skilled at solving real-world problems through efficient, scalable software solutions. Possess a strong analytical mindset and thrive in dynamic, collaborative environments. Eager to contribute technical and problem-solving skills to impactful, innovation-driven projects.





### EDUCATION

Bachelor of Technology in Computer Science and Engineering	CGPA
Vellore Institute of Technology	9.37 / 10.0
07/2023 - 06/2027 Vellore, Tamil Nadu	
12th Grade	Percentage
Sri Shirdi Sai Junior College	86.4 / 100
06/2021 - 06/2023 Rajahmundry, Andhra Pradesh	
10th Grade	Marks
Sri Shirdi Sai Vidyanikethan	592 / 600
06/2020 - 06/2021 Rajahmundry, Andhra Pradesh	

### SKILLS

C++	Java	Python	Data Structures and Algorithms	SQL	DBMS	HTML	CSS	JavaScript
React.js	Object-Oriented Programming	Generative AI	ML	Operating Systems	MS Excel			
MS Word								

### CERTIFICATIONS

	Graph Search, Shortest Paths, and Data Structures
	Coursera
	Completed the "Graph Search, Shortest Paths, and Data Structures" course on Coursera, gaining hands-on experience in implementing graph algorithms like BFS, DFS, Dijkstra's, and understanding key data structures such as heaps and adjacency lists for efficient problem-solving.
	Divide and Conquer, Sorting and Searching, and Randomized Algorithms
	Coursera
	Completed Coursera's "Divide and Conquer, Sorting and Searching, and Randomized Algorithms" course, mastering merge sort, quick sort, binary search, and randomized techniques for problem-solving.
	Oracle Cloud Infrastructure 2025 Certified Generative AI Professional
	Oracle
	Gained foundational knowledge and hands-on experience in applying Generative AI principles using Oracle Cloud services, including model deployment, prompt engineering, and responsible AI practices.
	Problem Solvers: Exploring Data Structures & Algorithms
	FACE Prep
	Completed an intensive internship focused on mastering core DSA concepts using C++. Practiced and solved numerous problems on LeetCode, improving problem-solving efficiency and preparing for SDE-level coding interviews.

# PROJECTS

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## METRO RAIL APP (c++ Implementation)

- Designed and implemented** a graph-based route planner in C++ to compute the shortest metro paths and fares, applying algorithms such as Dijkstra, BFS, and DFS.
- **Built a scalable, user-friendly metro navigation system**, increasing user engagement by 20% through an enhanced interface.
  - **Optimized route calculation algorithms** by 25% using Dijkstra's algorithm with a custom heap and adjacency list in C++.
  - **Implemented a fare calculation system** by modeling Delhi Metro as a weighted graph, enabling fast and accurate fare computation.
  - **Created the core graph and path optimization module** for efficient shortest-path solutions.
  - **Applied advanced DSA concepts to real-world problems**, bridging theoretical knowledge with practical implementation.
  - **Collaborated closely in a team-based development cycle**, integrating individual modules into a cohesive and fully functional system.

# ACHIEVEMENTS

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## JEE MAINS

Ranked in the top 4 percentile among over 1 million candidates in JEE Mains 2023, one of India's most competitive engineering entrance exams

## EAMCET Ranking

Ranked 2629 out of 130,000+ candidates in Telangana EAMCET 2023, a state-level engineering entrance exam

# EXTRACURRICULAR ACTIVITIES

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## Blood Donation Camp

Volunteered in blood donation drives by educating donors on the donation process, eligibility criteria, and the significance of blood donation. Assisted the medical team in setting up donation stations and arranging necessary equipment

## Green India Challenge

Led tree plantation drives, promoted green space preservation, and conducted awareness campaigns on sustainability. Engaged local communities, schools, and organizations to support environmental initiatives