

Hiren Joshi

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EDUCATION

Parul Institute of Technology, Vadodara

Bachelor of Technology in Computer Science

CGPA: 7.89

Sep. 2021 – May 2025

MPIA School, Sagwara

Completed HSC in Physics, Chemistry, Mathematics

Percentile: 95.80

July 2020 – July 2021

Ashirwad Niketan School, Diwara Chhota

Completed SSC with core subjects including Maths and Languages (Class Rank: 2nd)

Percentile: 89.50

March 2018 – March 2019

EXPERIENCE

C++ Trainee (1 Month Summer Internship)

ByteXL

May 2024 – June 2024

University-Affiliated Program

- Developed **20+ C++ console applications**, applied **OOPs principles (encapsulation, abstraction)** to design **modular class hierarchies** for **extensible systems**. Engineered **memory-efficient solutions** using **raw pointers, STL containers**. Achieved **Valgrind-validated leak-free** core modules via **RAII-inspired manual memory management**.
- Built **user-friendly console interfaces** with strong validation and error handling for **crash-free execution**. Wrote **modular, production-grade C++** following **Google Style Guide** (RAII, const-correctness) with clean, well-documented code.

PROJECTS

Cross-Platform C++ PowerShell (Windows & Linux Compatible)

- Developed a **robust cross-platform shell** supporting Windows API and POSIX, with integrated **process, file-system, and terminal management**.
- Engineered a **dynamic command parsing engine** supporting flexible syntax (`type nul>f1 f2, echo content >f1 f2`) and multi-file or folder operations where needed, such as **file creation, deletion, content merging, Overcoming and enhancing Windows PowerShell limitations**.
- Developed **25+ system-level commands** with full OOP pillars (**encapsulation, inheritance, polymorphism, abstraction**) and modular design for maintainability, readability, and scalability. Built **safe, cross-OS process management** with critical-process protection and multi-PID/name support, backed by a **clean, extensible LLD architecture**.

ACHIEVEMENTS

- Knight on LeetCode (Rated 2100+)**
- Specialist at Codeforces**
- Biweekly Contest 161: Global Rank #163 | National Rank #59**
- Top 1% LeetCode** (All-Time National Rank: **2117/187,190**)
- 900+ Days Daily Challenge Streak** on LeetCode
- Solved **2100+ algorithmic problems** (**1300+ on LeetCode, 450+ on Codeforces**)
- Applied Problem Solving (Algorithmic Rubik's Pyraminx Solver):** Manually solved using **permutations via backtracking**, derived **11 distinct patterns**, and achieved **blindfolded solves all without external help**. [\[Video Walkthrough\]](#)
- [LeetCode/hirenjoshi](https://leetcode.com/hirenjoshi) | [CodeFolio/hirenjoshi](https://codefolio.com/hirenjoshi)

SKILLS

- Languages:** C/C++
- Developer Tools:** VS Code
- Courseworks:** Data Structures and Algorithms, Operating Systems, Object-Oriented Design and Programming, Computer Networks, Database Management Systems
- Fluent in English** (Written and Verbal), with strong communication and presentation skills
- Strong teaching skills** with the ability to explain complex technical concepts clearly
- 75–100 WPM** typing speed