Hiren Joshi

+916352067730 | 1630hiren@gmail.com | linkedin.com/in/hirenjoshi1630 | github.com/hiren-j

EDUCATION

Parul Institute of Technology, Vadodara   CGPA: 7.89
Bachelor of Technology in Computer Science   *Sep. 2021 – May 2025*

EXPERIENCE

C++ Trainee (1 Month Summer Internship)   May 2024 – June 2024
ByteXL   *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)*   Project Link

- Engineered a **custom PowerShell-like shell** in **modern C++** to overcome core limitations of **Windows PowerShell**, enabling advanced batch-based system operations.
- Designed and implemented a **dynamic command parsing engine** supporting **relaxed syntax**, **flexible spacing**, and **batch operations** across **30+ commonly used commands**.
- Built comprehensive **file and directory management modules** enabling **multi-file and multi-directory creation, deletion, renaming, copying, and content merging** within a single command—capabilities not natively supported in **Windows PowerShell**.
- Implemented robust **process management** with **OS-aware behavior** for **Windows and Linux** using **Windows API** and **POSIX system headers**. Developed the system using **Low-Level Design (LLD)** and **Object-Oriented Programming (OOP)** with a **modular header/implementation architecture**, leveraging the **C++17 standard filesystem API** to ensure **robustness**, **code readability**, **portability**, and **systems-level correctness**.

ACHIEVEMENTS

- **Expert at CodeForces**
- **Knight on LeetCode (2100+ Rated)**
- Biweekly Contest 161: **Global Rank 163 out of 31,670 participants | National Rank #59**
- CodeForces Round 1075 (Div. 2): **Global Rank 990 out of 29,048 participants**
- **Top 1% LeetCode** (All-Time National Rank: **2,117 out of 187,190 participants**)
- **1000+ Days Daily Challenge Streak** on LeetCode
- Solved **2400+ algorithmic problems** (1400+ on LeetCode, 500+ 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 | CodeForces/hirenjoshi | CodeFolio/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
- **80–100 WPM** typing speed