Aryan Shrivastava

aryanshrivastava495@gmail.com | +91 9289570300 | linkedin.com/Aryan | github.com/Aryan

EDUCATION

International Institute of Information Technology Hyderabad — **Hyderabad, India**
B.Tech in Electronics and Communication Engineering : CGPA : 8.17 — Graduation: May 2027

Sun Valley International School — **New Delhi, India**
Class XII CBSE: 95% — 2023

EXPERIENCE

Undergraduate Researcher — **Apr 2025 - Present**
Signal Processing and Communication Research Centre (SPCRC), IIIT Hyderabad — **Hyderabad**

- Designing a signal processing algorithm to estimate blood pressure and heart rate from acoustic signals based on more than 200 samples.

PROJECTS

QuickBlog | *MERN Stack, Google Gemini and ImageKit API* — GitHub Link

- Built a full-stack AI powered blogging platform using the MERN stack, integrated with Google Gemini API for AI driven blog content generation (summarization, auto-writing).
- Enabled real-time image optimization and transformation via ImageKit.io API.
- Built comprehensive backend services including RESTful routes for posts, authentication, authorization, and AI content generation, all powered by Express.js and MongoDB, increasing blog content generation efficiency by 80%.
- Deployed on Vercel with CI/CD pipeline for seamless updates.

Solving Inventory Inefficiencies Using Advanced SQL | *MySQL, QuickDBD* — GitHub Link

- Built a normalized SQL database for a retail chain spanning 8+ cities, 5000+ SKUs, 20+ stores, and 3 warehouses.
- Built 10+ advanced SQL queries for inventory turnover, reorder prediction, and stockout flagging.
- Generated performance reports using joins, CTEs, and window functions, improving stock visibility across 100+ product categories and reducing stockouts by 30%

Advanced xv6 | *Algorithm, Operating System* — GitHub Link

- Built and Integrated 3 CPU scheduling algorithms — MLFQ, Lottery Scheduling, and Round Robin — into xv6 OS kernel. to improve process prioritization and fairness.
- Benchmarked and visualized turnaround and wait times using Python, demonstrating MLFQ's superior responsiveness by 10% under mixed workloads.

C-Shell | *C, Operating System, MakeFile, System Calls* — GitHub Link

- Built a user-defined interactive shell in C with support for semicolon-separated commands and persistent command history (up to 15 unique entries).
- Implemented custom Shell Commands: **hop** (cd), **reveal** (ls) and **seek** (find), for Directory Navigation, File Listing and Searching.

TECHNICAL SKILLS

- **Programming:** Python, C/C++, Javascript, SQL, OOPS
- **Web Development:** HTML5, CSS3, React js, Node js, RESTful APIs
- **Databases:** MySQL, MongoDB
- **Tools/Technologies:** Git, Linux, Pandas, NumPy, Vercel, Power BI

Achievements

- JEE Mains 2023: Secured AIR-2804, among 10 million (Top 0.2%) in the examination.
- JEE ADV 2023: Among Top 3% in the examination.
- LeetCode: Rating 1769 (Handle - @AryanShri)
- Top 8.93% globally among active LeetCode users

RELEVANT COURSEWORK

- Computer Programming, Data Structures and Algorithms, Linear Algebra, Real Analysis, Probability and Random Processes, Processor Architecture