



Examination	University	Institute	Year	CGPI
Graduation	NIT Hamirpur	NIT Hamirpur	2024	8.33
Intermediate/+2	HP Board	Gurukul Public School,Amb	2019	91.6%
Matriculation	HP Board	Sri Sai Baba Pub.School	2017	92.8%

Skills / Tools

- ❖ **Languages :**
 - C, C++, Python, JavaScript, TypeScript, SQL, GO
- ❖ **Utilities :**
 - Git, Bash, Markdown, JSX, Linux
- ❖ **Frontend Framework :**
 - Tailwind CSS , React Js, Material UI (MUI), BootStrap
- ❖ **Backend Framework :**
 - Flask(Python), Express(Javascript)
 - Google Firebase
 - ServerLess Lambdas (Vercel Server)
- ❖ **Full Stack Framework :**
 - NextJs (Both App and Page Route)
- ❖ **Databases :**
 - **RDBMS :** SQLite, MYSQL
 - **Time Series Database :** Influx DB
 - **In Memory Database :** Redis
 - **Document Database :** MongoDB
 - **Graph Database :** Neo4j

Volunteer Experience

❖ GDSC NITH :

July 2021-Dec 2022

- Conducted engaging workshops and interactive hands-on sessions to introduce students to the world of React and Next.js.
- Achieved a 40% increase in workshop attendance over six months by implementing more interactive and engaging sessions.

Achievements

- Maintained a consistently CGPA of 8.3 throughout my academic career, demonstrating dedication to knowledge acquisition.
- Completed 12+ complex projects myself and under Dr. Mohit Kumar and Dr. Kamlesh Dutta professors of CSE department.
- Rank 1 out of more than 200 students in creating projects for digital image processing.
- Build quiz application for E-cell club used by more than 4000 students at a time. (Oct 2022 - Nov 2022)
- Problem solving, 800+ complex and algorithmic coding questions including platforms. eg.codechef,leetcode, gfg etc.
- Deep knowledge of system design, distributed systems.

Relevant Courses

Data Structure and Algorithm *	Computer Networks *
Databases *	Operating System *
Computer Graphics *	Distributed System *
System Design *	Computer Org. And Arch. *

Projects / Experience

[NandaDB Database](#) (Build From Scratch) Nov, 23 - Dec, 23
Course related, DBMS Nanda->wealth (**Data is the new oil**)

- Build my own Database from Scratch in C++ language.
- Used **LSM (Log Structure Merged Tree)** similar structure for maintaining data, for faster writing speed. Used bloom filters, caching system to optimize reading speed.
- Utilized low-level programming in C++ to enhance speed and implemented Power On Self Test (POST) for proactive fault detection prior to usage.

[Web Server \(C Socket Programming \)](#) Sept, 23 - Oct, 23
Course related, Computer Networks

- Socket connections accept requests over http/1, http/2, http/3 enabling multiplex connection, QUIC connection.
- Enhanced connection security by integrating SSL encryption protocol into the C-based framework, safeguarding data from potential attackers and ensuring secure communication without compromising speed and efficiency.

[PC Security Sys.](#) (PC Safety System) Dec, 22 - Jan, 23
Self Project

- Secured personal computers against unauthorized access and threats through the implementation of a dedicated security handler.
- Advanced authentication mechanisms, robust access controls, and real-time monitoring to ensure the safety and integrity of PC systems. One of the rare methods of connection pooling.

[Video Meetings](#) (Scratch Socket.io, WEBRTC use) June, 23 - Aug, 23
Self Project

- Video Calls unlimited with the features of white board, chat and screen share. (Without any third party api, build from scratch)
- Express server using socket.io for handling websocket connection.
- Used pair to pair connection to share video (UDP)
- Using a heartbeat mechanism for connection maintenance.

[Google / Microsoft Office](#) July, 23 - Aug, 23
Self Use WorkHub-> All Work at one Place

- Build microsoft docs/ google docs with common features and mail.
- Doc to pdf, html and docx download options. Comment with work, multiple colors, features included..
- AI chat integration, increasing the working efficiency.
- Pooling system for mail receiving, can attach files as attachments.

[Photo Gallery](#) (Unlimited Image Storing Feature) Feb, 23 - Mar, 23
Self Use PixelVault-> Secure Photos

- Unique Strategy to store unlimited in free (not a clickbait).
- Handle all country storage server access using blob conversion strategy. (Some countries network system don't allow all servers)
- Handling security, it's not possible that anyone can access others' photos.

[SecureSMTPmailer](#) (SMTP mailer in C) Sept, 22
Course related, Computer Network

- Fast and raw SMTP mailer, written in C from raw socket programming.
- SSL and asymmetric encrypted data shared to the server.
- Safe from attacks like Man In Middle Attack. HTML enabled mail.

Under Progress Projects:

- [Load Balancer Server](#) (In C language)
- Layer 4 load balancing, with user friendly configuration systems like package.json -> config.json.
 - Including security methods, balancing strategies.
 - Concurrency using multithreading concepts.