

EDUCATION

- Siliguri Institute of Technology | MAKAUT - June 2021 - June 2025
Bachelor of Computer Science and Engineering (4 years) CGPA - 8.70
- Sarwan Memorial School (ICSE) - 2007 - 2019
Percentage - 88.8%, 96/100 in Economics

TECHNICAL SKILLS

- **Programming Languages:** C++, TypeScript, Python
- **Frameworks & Runtime Systems:** Next.js, Express.js, NumPy, Pandas, Raylib, WebAssembly
- **Systems & Infrastructure:** Arch Linux, Docker, Tmux, Hyperconverged Infrastructure (HCI)
- **Networking & Cloud:** CCNA, Nutanix Cloud Platform, VMware, Vultr
- **Development Tools:** Git, Postman, Socket.io
- **Databases:** MongoDB, PostgreSQL and Redis

EXPERIENCE

Intern - System Reliability Engineer

Nutanix | Jan 2025 – Jun 2025

Executed infrastructure and full-stack development tasks across **Linux systems, networking, containerization, and virtualization**. Built and deployed real environments, wrote production-ready scripts, and actively contributed to backend integration, system provisioning, and internal platform improvements.

Key Contributions:

- Built and managed **Linux-based environments**, including installing and configuring distros, managing users and permissions, and handling system-level tasks like mounting storage, setting up SSH, and configuring services.
- Provisioned and managed virtual machines using **VMware vSphere, ESXi, and Nutanix AHV**, uploaded ISOs, created custom VMs, and handled resource allocation and performance tuning.
- Configured enterprise networks based on **CCNA** standards, including VLANs, routing, IP addressing, and switch configuration and resolved connectivity issues across virtual and physical interfaces.
- Developed automated container workflows by creating user-specific **Docker** containers, writing **Bash scripts** for setup and deployment, and using **docker-compose** to manage multi-container environments.
- Migrated frontend apps from **JavaScript** to **React** and designed and developed **Django REST APIs** to support dashboards built with **Nextjs**, enabling smoother data flow and real-time updates.
- Managed and monitored **HCI** clusters with **Nutanix AOS** and **Prism Central**, added nodes, configured high availability settings, and ensured cluster health and resource balance.

PROJECTS

Order Matching Engine - Article

- I built a high-performance order matching engine in C++ using **Red-Black Trees** to manage BUY and SELL orders efficiently.
- Orders are parsed from JSON files, matched by lowest ask and highest bid on the same token, and dynamically updated.
- The system prioritizes volume-maximizing trades over price optimization, simulating a real-time exchange environment.

Alpha - Telegram Bot

- Deployed and configured Alpha, a custom Freqtrade-based trading bot, using **Tmux** for persistent sessions.
- Integrated Binance API keys and developed an automated **SMA Crossover strategy**.
- Created custom commands for live trade data, balance checks, backtesting, and notifications.
- Managed end-to-end setup and achieved fully automated, 24/7 live trading on a single cryptocurrency pair.

Wasm Games - Play

- Engineered an interactive gaming platform featuring high-performance C++ games like Game of Life, Paddle-Battle, and Space Shooter, playable directly in the browser. Leveraged the capabilities of **WebAssembly (WASM)** and **Emscripten** for near-native execution speeds. Utilized advanced Object-Oriented Programming (OOP) principles and raylib framework.

LiveScript - Video Demonstration

- LiveScript is a real-time web-based code editor built with **React** and **CodeMirror**, enabling collaborative coding with live updates via **WebSockets** (Socket.io). Achieved strong adoption in my college, with 300+ active users when it was hosted.
- Utilizes **BaaS** for secure authentication, scalable data storage, and room management.

CERTIFICATIONS AND COMMUNITY EXPERIENCE

- **CCNA Certified** - Skilled in Network Architecture, IP addressing, VLANs, OSPF, NAT, ACLs and network automation and security.
- Competitive Programming Core Member - Google Developer Students Club, SIT
- Legacy JavaScript Data Structures and Algorithms - freeCodeCamp.org

ACHIEVEMENTS

- Winner of intra-college hackathons **CodeKraft**, **CodeXQuest** and **TechFrenzy**.
- Solved 550+ algorithmic problems on LeetCode and CodeChef (Leetcode account: [nishant892](#), Codechef account: [nishant892](#))
- Achieved a highest rating of 1076 at chess.com. (Account: [POkhrel](#))