

## EDUCATION

Indian Institute of Technology Kharagpur	Kharagpur, India
Bachelor of Technology in Chemical Engineering   CGPA: 8.62	2023-28
Billabong High International School	Bhopal, India
H.S.C   95.6%	2023
Billabong High International School	Bhopal, India
S.S.C   97.2%	2021

## TECHNICAL SKILLS

- **Programming Languages:** Go, C/C++, Bash, Python, HTML, CSS, Javascript
- **Libraries, Frameworks and Databases:** PostgreSQL, MongoDB, MySQL, NextJS, NodeJS, ReactJS, TailwindCSS
- **Cloud & DevOps:** Amazon Web Services (AWS), Microsoft Azure, Docker, Nginx, Git/GitHub, Linux
- **Tools:** VSCode, Git/GitHub, Jupyter, Google Colab

## PROJECTS

- WikiHunt-Bot – Go, Python, Sentence-BERT2025
- Developed a **Wikipedia pathfinding** service using a **microservices architecture** with Go and Python. This service **leverages real-time data** from **Wikipedia APIs** and employs graph traversal algorithms (**DFS/BFS**) to find connections between articles
  - Optimized intelligent pathfinding capabilities by integrating NLP models (**Sentence-BERT**) for semantic similarity and implementing ML inference, achieving a **70% reduction** in **API requests** and a **50% decrease** in **cost** through intelligent batching
  - Engineered a **high-throughput backend API** in Go, optimizing graph traversal algorithms to **slash average pathfinding latency** by over **90%** (from 3+ minutes to <20 seconds), significantly improving user experience for a microservices-based system
- Attendance Monitor – Go, PostgreSQL2025
- Built a **full-stack** attendance monitoring system from the ground up, which is production ready, utilizing **Go** (Golang) for the backend and React for the frontend, demonstrating versatility and end-to-end project ownership
  - Architected a **secure, scalable backend** for a **production-ready** attendance system using **Go** and the **Gin framework**; implemented a **RESTful API** and custom **JWT-based** authentication to ensure data integrity and role-based access control
  - Designed a normalized **PostgreSQL database schema** and authored optimized SQL queries using **pgx** to **eliminate data redundancy** and ensure data integrity for a system designed to **scale to thousands** of student records
- Job Listing CRUD API – Go, PostgreSQL, Docker2024
- Architected and implemented a modular, secure and scalable **RESTful API** in Go with **5+ endpoints** for full **CRUD functionality**, securing sensitive operations with role-based access control via **JWT authentication** on crucial endpoints
  - Orchestrated the deployment of a high throughput **microservices application** using **Docker and Docker Compose**, which established a **unified development environment** to **slash** new developer setup and configuration **time by over 95%**
- Command-Line To-do List App – Go2024
- Designed and implemented a user-friendly **Command-Line Interface** (CLI) to-do list application from scratch using GoLang
  - Developed modular features allowing users to **create, edit, toggle completion status, and delete tasks**
  - Utilized Go's built-in file I/O to persist **task data locally**, enabling **state retention** between sessions

## LEADERSHIP & EXPERIENCE

- Technology Coordinator – Technology Students' Gymkhana, IIT Kharagpur2025 – Current
- Managed the **full-stack development** lifecycle of the university's high-traffic induction portal, serving **2,000+ students**; oversaw **project planning, development, testing, and deployment**, for a platform with **99.9% uptime** during peak registration period
  - Directed the development of **3+ key campus technology solutions** after gathering requirements from key stakeholders, including a **digital noticeboard** and an **automated library check-in** system that **reduced manual processing time** by **90%**
  - Managed a team of **5+ Web Secretaries**, coordinating technical proposals and execution to meet institute-wide technology goals
- Executive Head – Developers' Society, IIT Kharagpur2025 – Current
- **Revitalized the Developers' Society** by formulating a **new team structure** and leading the recruitment process from scratch
  - Led the **restoration & revival** of the 'ApnaInsti' application, **fixing legacy code** and **resolving bugs** to restore full functionality

## RELEVANT COURSEWORK

Programming and Data Structures with Lab | Advanced Calculus | Theory of Partial Differential Equations | File Organization and Database Systems Laboratory | Linear Algebra, Numerical and Complex analysis | Transform Calculus

## EXTRA-CURRICULAR ACTIVITIES

- **Vice-Captain, Interhall General Championship** – Led and motivated team as Vice-Captain in the Interhall Basketball Championship, contributing to strategic gameplay and team cohesion
- **Co-writer and Actor, Nukkad** – Performed and collaborated in the Interhall Street Play Competition, enhancing hall representation through impactful theatrical expression
- **Photography** – Cultivated a personal photography project on Pexels, attracting over 40 thousand views