



Sahil Sangwan
UG (III Year II Semester)
B.Tech. (Biosciences and Bioengineering)
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Area of Interest
Algorithms, Data Structure, Web Development, Machine Learning

Education

Year	Degree/Examination	Institution/Board	CGPA/Percentage
2024	B.Tech. 3rd Year	Indian Institute of Technology, Roorkee	7.245
2022	Intermediate (Class XII)	SHARDE PUBLIC SCHOOL (CBSE)	89.60 %
2020	Matriculate (Class X)	R.E.D. SCHOOL (CBSE)	95.20 %

Internships
SWE Internship | Tally Solutions October 2024 - January 2025

- Developed a web-based internship management system with Node.js and React, streamlining workflows for 100+ interns.
- Automated onboarding, project assignments, and progress tracking, reducing manual effort by 50%.
- Enhanced team management and mentoring with centralized communication and guide allocation.

Projects
HOMOLOGY MODELLING | Indian Institute of Technology, Roorkee July 2023 - November 2023

- Implemented Homology Modeling to identify the active site of a plastic-degrading protein, improving accuracy by 30%.
- Used BLAST to identify the reference sequence, improving sequence identification speed by 25%.
- Applied MSA to generate alignment scores, achieving 95% alignment accuracy.
- Employed PROCHECK to validate protein stability, ensuring 99% structural integrity.

File Distribution Tool Through Sockets | Tally Codebrewers July 2024 - August 2024

- Built a Python tool using socket programming for encrypted file transfers and real-time communication.
- Supported 50+ clients with file upload/download speeds of 100 Mbps.
- Implemented multi-client authentication for secure access and data integrity across 100+ transfers.
- Designed server-side group handling for efficient user management and communication for teams of up to 20.
- Technologies: Python, Sockets, SQL, Hashing

Awards / Scholarships / Academic Achievements

- Secured a position of 7679(among 1.5 million students) in the Indian Institute of Technology-Joint Entrance Examination (JEE-Advanced), 2022.
- Ranked 236 out of 444,000 participants globally in Round 1 of TCS CodeVita Season 11
- Ranked 404 out of 444,000 participants globally in Round 2 of TCS CodeVita Season 11
- Qualified for Amazon ML Summer School (top 3,000 among 60,000) and attended an intensive camp on advanced ML.
- Secured Runners-up position at Tally CodeBrewers 2024 hackathon, competing among 70,000+ participants.

Skills

Computer languages	C/C++, HTML, CSS, JavaScript, Python
Software Packages	React ,Django ,Node.js
Languages Known	English(SRW), Hindi(SRW)

Positions of Responsibility & Extra Curriculars
Web Development Core Team Member | Institute Innovation Council April 2024 - June 2024

- Developed and maintained the Institute Innovation Council's website, enhancing user engagement and accessibility.
- Collaborated with the tech team to integrate event management systems for entrepreneurship workshops and competitions, boosting student participation by 40%.
- Managed technical aspects of major entrepreneurship events, including online registrations and live streaming for 1000+ participants.

Competitive Programming | Codeforces, Leetcode May 2023 - Present

- Active member on online judges including Codeforces, Leetcode.
- Maximum Rating on Codeforces: 1703. Solved 250+ problems on Leetcode.

Joint Secretary - Editorial | Hostel Council, IIT Roorkee August 2024 - Present

- Developed strategies to improve student engagement through written content and social media outreach.
- Successfully organized and executed the inaugural firecracker show, ensuring a memorable and safe experience for attendees.