SHOBIT NAIR

THIRD YEAR UNDERGRADUATE , IIT ROPAR

CONNECT WITH ME

Linkedin
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CodeChef
CodeForces

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EDUCATION

2019 - 2023
B.Tech Computer Science

Indian Institute of Technology Ropar
CGPA : 8.23

EXTRA CURICULLAR

Coordinator
Coding Club , IIT Ropar

Prepared problem sets based on Data structures and algorithms for coding competitions and conducted doubt clearing sessions and post-contest analysis for various programming contests

Student Mentor
ISMP , IIT Ropar

Responsible for proper guidance and mentoring of 6-7 students who need to get accustomed to college life. Tasks involve emotional and academic guidance with persuasive communication.

ACHEIVEMENTS

ACM ICPC 2021

round 1 : Ranked 122 out of 3500 teams

round 2 (regionals): Ranked 55 out of the 700 shortlisted teams.

MICROSOFT ENGAGE 2021

Obtained a **direct summer Internship** offer from Microsoft for the prototype I created. The project was rated one of the best by a huge panel of experienced software engineers.

GOOGLE CODEJAM 2021

Global Rank 491
India Rank 34

INTER IIT CODING COMPETETION

Secured Rank 13 in the inaugural round, participated by 11 IITs

OTHER CODING PLATFORMS

codeforces : **Candidate Master** (1907 Rating)
codechef : **5 star** (2156 Rating)

SKILLS AND LANGUAGE

Web Development
- React JS
- Angular JS (Basic)

Backend
- Node JS , Express
- Python FastAPI

Libraries / API
- Gradle using Java built with Kotlin/Groovy.
- Unit Tesing using Junit Jupiter

SQL
- PostgreSQL ,MySQL
- SQL Backends
  - JDBC driver Java
  - SQLAlchemy Python
  - pg library in Node JS

Competetive Coding
- C / C++

MAJOR PROJECTS

{ PROJECT HEADING LINK TO GIT THEIR REPOSITORY }

Microsoft Teams Prototype   **DEMO**   **WEBSITE**

Tech Stack : React JS , Node JS , Redux
APIs used : WebRTC , Twilio , Firebase , Socket.io
Deployed using **AWS Amplify**

- Individual project as a part of Microsoft engage 2021.
- **A videocall feature** that can create instant video meetings and invite other users via a unique meeting id link. It can connect upto 50 users and has screensharing and inbuilt chat system that works parallel to the group video call.
- **A group channel feature** (like discord) where users can create multiple channels (with / without password) and invite other users to share important messages.
- Optimised UI to work on both **small and large devices** with the same functional features.

Rated among one of the best projects during Engage 2021 which got me a direct summer internship offer at Microsoft.

Facial Data Management Server (Python API Server)

Tech Stack : Python , FastAPI , PostgreSQL , SQLAlchemy
API used : www.github.com/ageitgey/face_recognition
Unit Testing : Pytest

- Project as a part of Software engineering (CS305)
- The server can take file uploads in the form of ZIp archives and raw Images.
- The images are then scanned for faces and their face datas are stored in database managed using PostgreSQL linked with SQLAlchemy (Python library).
- The server can check for K-Best Matches for any image query from all the stored face data. (13000 faces + 1000s manually added)

Can be used as an api server for online face recognition for various online coding contests , interviews , examinations.

XML CDATA to SQL (Java Library)

Tech Stack : Java , Gradle , JDBC SQL driver , MySQL
Unit Testing : Junit Jupiter

- Project as a part of Software engineering (CS305)
- XML contains a queryID and a template SQL commands to do a specific task.
- The library gets a Class object and queryID as input. It then parses the SQL command from the XML CDATA file for the given queryID and then applies the parameters in the SQL from the input Class.
- This SQL command is then run and managed via JDBC driver with database set up using a MySQL server.

Algorithm Visualizer   **WEBSITE**

Tech Stack : Angular , TypeScript , Material UI Design
Deployed using **Heroku**

- A fun Group project : My role involved the complete UI / Frontend and deployment of the website.
- A web application that deep visualization of some of the most well known algorithms involved in sorting , searching and pathfinding.
- Has ability to change array dimensions , create custom grid layouts and change animation speeds of every algorithm.