Harshit Bhalla

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Education

Indian Institute of Technology, Delhi 8.48 CGPA
Bachelor of Technology in Chemical Engineering *2020-24*

Sri Sathya Sai Higher Secondary School 94%
Class XII *2018-19*

Shirdi Sai Public School 10 CGPA
Class X *2016-17*

Relevant Coursework

- Linear Algebra
- Probability & Stochastic Processes
- Numerical Computational Analysis
- Advertising & Sales Management
- Intro to Algorithms & DS
- Microeconomics

Experience

Executive, Economics Club, IIT Delhi New Delhi, IN
Trading and Investment Team *Sept 2021*

Projects

Pinch-Zoom OpenCV | *Python, Open-CV, Mediapipe* August.2021

- Mediapipe is used to infer real-time 21 3D landmarks of a hand from a single frame.
- Data augmentation (e.g. rotations, translation and scale) and allowed the network to dedicated most of its capacity towards coordinate prediction accuracy using normalization.
- Mapped 4th and 8th corresponding 3D coordinates to update real-time distance between the index finger and the thumb.
- PyAutoGUI was used to control the mouse and keyboard to automate interactions with the program developed.

Numerical Computational Methods | *C++* August.2021

- Summarized and Implemented Critical appraisal of water quality model parameters, of river Ganges, pre & post COVID-19, India -A Research paper by Kamakshi Singh and Ramakar Jha.
- Implemented Euler's Method, RK-2& RK-4 method, Heun's method, etc. to formulate Critical temperature of Ganges and analyze dissolved Oxygen, and biological demand levels.
- Further taken a path forward to predict the parameters in the upcoming years, designing a regression model that analyzed the trend of the past, and had an accuracy more than 95%.

Quiz System Design | *Object Oriented Programming, Python* February.2021

- Designed an automatic quiz system, through which students can take quizzes in their courses.
- Attributes implemented were Enrollment No, List of courses, Course Code, Quiz Description, Attempted Answers.

Expense-Tracker | *React, JSX, CSS* May.2021

- Developed an expense tracker to keep a track of expenses
- Displays a chart made in CSS, to give a clear visual of yearly filtered expenses fed in by the user.

Personal Portfolio | *JavaScript, HTML/CSS* April.2021

- Developed a personal portfolio from scratch, without using any frameworks/libraries.
- Day and night UI, Complex Animations, Completely responsive.

Technical Skills

Languages:Python, JavaScript, C++, HTML/CSS

Libraries:OpenCV, Pyautogui, Numpy, Mediapipe, Pandas

Frameworks:NextJS, React, Bootstrap, TailWind-CSS

Developer Tools:Git, VS Code, Netlify, IntelliJ Idea

Past Achievements

- Achieved AIR 1627 competing with a Million candidates in India's one of the Toughest Examinations(IIT-JEE Adv).
- Secured 99.23 percentile in JEE-Mains.