

## SCHOLASTIC ACHIEVEMENTS

- Awarded **3 AP** (Advanced Performer) and **28 AA** grades for exceptional performance (2021)
- Received **Institute Academic Prize** (top **20** of CSE Batch) for stellar academic performance (2021)
- Secured **All India Rank 6** in **JEE Advanced** amongst 1,50,000 candidates (2020)
- Secured **All India Rank 111** in **JEE Main** (B.Tech) amongst 9,20,000 candidates (2020)
- Received the **Reliance Foundation Scholarship** alongside **80** other candidates (2020)
- Qualified for **Indian National Physics Olympiad** alongside **457** other students. (2019)
- Selected for **Kishore Vaigyanik Protsahan Yojana Exam**, ranking **73rd** in the aptitude test (2019)

## WORK EXPERIENCE

**Quadeye Securities LLP** |  |  | *Internship*

May 2023 - July 2023

→ Quant Strategist

- Designed and implemented a minimalist trade simulator in **R**, **C++** and **RCpp** to test strategies.
- Wrote dozens of bash and R scripts to manipulate and analyze input and output data files spanning dozens of gigabytes.
- Tested several different strategies, varying order types and equity-futures arbitrage choices.

**WinZO Games** |  |  |  | *Internship* | Mr Abhishek Goyal, Mr Vasu Vardhan

May 2022 - July 2022

→ Backend Developer

- Designed and implemented unit testing suite from scratch for one of the key services using **Jest**.
- Implemented time-efficient endpoints for player skill update using prefix sums in **Apache Cassandra**.
- Undertook research tasks: automated syntax documentation of API endpoints and extraction of debug logs from packages; with their solutions shared via **Confluence** and a privately published package.
- Carried out various routine activities such as forwarding one service's endpoints to another, connecting databases to back-office application and migrating services from previous tech-stack.

**Websites for ISI, Delhi** |  |  | *Freelance Assignment*

May 2023 - July 2023

→ Frontend Developer

- Implemented two modular and responsive websites for Indian Statistical Institute, Delhi with **Angular**.
- Abstracted design code from the content to minimize the effort necessary for updating the site.
- Led a watchful and thoroughly function deployment of the sites on their server, clearing multiple hurdles.

**Bodhitree** |  |  | *RnD* | Prof. Kamewari Chebrolu

January 2022 - April 2022

→ React native application for a Learning Management System

- Designed and implemented core app navigation structure with nested stack navigators and drawers.
- Implemented custom components to engage users with content such as a video player and question widgets.
- Produced a final release build covering all of the course content permissible with the API's status quo.
- Implemented consistent styles across the app for dark and light modes.

**FaceSafe** |  |  |  | *Internship* | Mr. Javed Sheikh at Alorb Tech

December 2021 - January 2022

→ Digital project management and hybrid work model SaaS application

- Migrated back-end services to a serverless architecture using AWS Amplify and Lambda.
- Migrated front-end codebase to modularized app in ReactJS.
- Implemented the feature to use the face recognition API, Amazon Rekognition.

## PROJECTS

**Educare** |  |  |  |  | *Course Project for CS251* | Prof. Amitabha Sanyal

Sept - Nov 2021

→ Modular website for course instruction (a Learning Management System)

- Engineered a website for course management, with a CRUD API, email notifications, and code autograding.
- Designed a well-organized **CRUD API** and optimal database plans on a **Django** server.
- Led frontend development with **Angular**, implementing features like forums and assignment submissions.




**CoReader** |  |  |  |  | *Personal Project*

Jan 2022, June 2022, Spring 2023

→ Glossary and note-making **flutter** app for attentive readers.

- Integrated **Google Sign-In** in the app, as well as other APIs to get book covers, definitions and ratings.


- Implemented an **Express** app for remote back up of user data, with **PostgreSQL**, and group chat features.
- Prepared the app for future work, with a solid code base and a successful launch on the Play Store.

**SimpleGraph** |  |  |  | Course Project for CS293 | Prof. Bhaskaran Raman

Oct - Dec 2021

→ C++ library for working with graph data.

- Implemented a hierarchy to process, and several practical functions to parse and modify graph data.
- Designed an efficient program to render the graphs dynamically in an interactive window.
- Established communication between the library and the application for rendering the graph.

**CycOOPs: Artist** |  | Personal Project

April 2022 - May 2022

→ Enhanced HTML5-canvas-inspired Graphics library





- Implemented a comprehensive class hierarchy for shapes and sprites to facilitate faster animations.
- Incorporated **multithreading** to permit sequential animation instead of iterative.
- Integrated **GTK event callbacks** to permit interactive animations responsive to clicks and key presses.

**KnowYourTube** |  |  |  |  |  | Personal Project

September 2021

→ WebApp to analyze one's Youtube Watch History






- Utilized numpy for efficient filtering and organization of watch history data obtained from Google Takeout.
- Set up a **Django** server to accept takeouts and provide insights on frequency trends and top-viewed videos.
- Designed a user-friendly **Angular** website to analyze results with customized tags and filters.

**GitHub Profiles** |  |  |  |  | Lab Assignment for CS251 | Prof. Amitabha Sanyal

Aug - Sept 2021

→ Website to summarize user profiles on GitHub

- Organized a database for users and their repositories on GitHub.
- Utilized the **GitHub Data API** to collect data about users' repositories and followers.
- Designed a smooth front-end website served by a Django server.

**Jungle Chats** |  |  |  |  |  | Personal Project

September 2021

→ WebApp to replay chats from exported files (primarily from WhatsApp chats)

- Implemented an **Angular** app to collect (from a server) and process chat exports
- Rendered an appealing real time simulation of the chats
- Implemented a **view tracker app** using Django and Angular

## TECHNICAL SKILLS

**Languages:** C, C++, Python, Typescript, Java, Dart, R/RCpp, Assembly, Bash and tools

**Frameworks or Libraries:** Angular, React, Electron, Socket.io, Express, React Native, Android Development, Flutter, Django, Numpy, PyTorch, Selenium, OpenCV

**Applications:** DataGrip, pgAdmin, VS Code, Android Studio, Chrome Dev Tools.

**Others:** GitHub, AWS Amplify, GDB, CMake, Regex, Latex, AutoHotKey Scripting.

## RELEVANT COURSES

- **Computer Science:** Data Structures and Algorithms, Design and Analysis of Algorithms, Discrete Structures, Game Theory and Algorithmic Mechanism Design\*, Program Analysis\*, Automata Theory, Implementation of Programming Languages, Abstractions and Paradigms in Programming, Logic for Computer Science, Digital Logic Design and Computer Architecture, Computer Networks, Operating Systems, Database and Information Systems, Topics in Virtualization and Cloud Computing, Foundations of Network Security and Cryptography\*, Artificial Intelligence and Machine Learning, Speech and Natural Language Processing, Computer Vision.
- **Mathematics:** Linear Algebra, Data Analysis and Interpretation, Calculus, Introduction to Numerical Analysis, Probability-I\*
- **Others:** Accounting and Finance, Marketing Management, Project Management, Psychology.

\* Ongoing

## EXTRACURRICULARS

- Development
  - Collaborated on projects such as InstiApp, a No-Dues portal and Digipad used across the institute.
  - Website developer for the winning team in the Inter IIT Tech Meet (March 2022)
  - Among the top 10 finalists for TSEC's 2023 Hackathon for app development. (February 2018)
- Writing and Language
  - Completed Level 1 Improv with Neville Bharucha and a workshop at The Habitat. (Spring 2023)
  - Secured 3rd Prize in IIT Bombay's creative writing competition. (Feb 2022)
  - Completed 3 **Creative Writing** courses from **Wesleyan University** on Coursera (July 2021)
  - Ranked **2nd** in Glendale Academy International's inter-school Competition (for poetry) (2017)
  - Completed the month-long Rozmer Writing Challenge. (June 2023)
- Volunteered with **NSS** to deliver lectures for high school students (December 2020 - July 2021)
- Secured **100%** and **97%** in the **DELTA A2** and **A1** papers (2022, 2018)