Hardik Rajpal
Computer Science & Engineering
Indian Institute of Technology Bombay

200050048
B.Tech.
Gender: Male
DOB: 24/02/2002

Examination	University	Institute	Year	CPI / %
Graduation	IIT Bombay	IIT Bombay	2024	9.64

🏆 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   ≋ C++, R, RCpp, bash
- Implemented and thoroughly optimized a historical trade simulator in **R**, **C++** and **RCpp** to test arbitrage strategies.
- Tested and analyzed various strategies, varying order types and equity-futures arbitrage choices.
- Wrote dozens of bash and R scripts to manipulate and analyze input and output data files spanning tens of gigabytes.

Websites for ISI, Delhi | *Freelance Assignment*   *May 2023 - July 2023*
👤 Frontend Developer   ≋ Angular
- Implemented two modular and responsive websites for the 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 functional deployment of the sites on their server, clearing multiple hurdles.

WinZO Games | *Internship* | *Mr Abhishek Goyal, Mr Vasu Vardhan*   *May 2022 - July 2022*
👤 Backend Developer   ≋ React, Cassandra, Jest, PostgreSQL
- Designed and implemented unit testing suite from scratch for one of the key services using **Jest**.
- Implemented several endpoints, notably, an efficient one 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.

Bodhitree | *RnD* | *Prof. Kamewari Chebrolu*   *January 2022 - April 2022*
👤 App Developer   ≋ React Native
- 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 and functionality permissible with the API.

📍 PROJECTS

CoReader | *Personal Project*   *January 2022, June 2022, January-April 2023*
➜ Glossary and note-making **Flutter** app   ≋ Flutter, NodeJS, PostgreSQL
- 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*   *October - December 2021*
➜ C++ library for working with graph data   ≋ C++, Electron, Javascript
- 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.

Educare | *Course Project for CS251* | *Prof. Amitabha Sanyal*   *September - November 2021*
➜ Modular website for course instruction (a Learning Management System)   ≋ Django, Angular
- 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.

</> TECHNICAL SKILLS

Languages: C, C++, Python, SQL, Typescript, HTML/CSS, Java, Dart, R/RCpp, Assembly, Bash and other Unix tools.
Frameworks/Libraries: Angular, React, Electron, Socket.io, Express, React Native, Android Development, Flutter, Django, Numpy, PyTorch, Selenium, OpenCV, NLTK.
Applications: DataGrip, pgAdmin, VS Code, Android Studio, Chrome Dev Tools.
Others: GitHub, AWS Amplify, GDB, CMake, Regex, Latex, AutoHotKey Scripting.