

# Rutvij Menavlikar

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## EDUCATION

### IIIT HYDERABAD

**B.TECH AND MS DUAL DEGREE IN  
COMPUTER SCIENCE AND  
ENGINEERING**  
July 2019 - Present  
CGPA: 8.71/10

## LINKS

Github:// **Rutvij-1**  
Codeforces:// **menavlikar.rutvij**

## ACHIEVEMENTS

- Won the Quantum Chemistry Challenge in Qhack 22 sponsored by Qunsys.
- Selected in IOITC (2017)
- Ranked #62 in the 2020 ICPC Asia Gwalior-Pune Regional Contest.
- Top 10 in Uber Hacktag 2.0 2022.
- Ranked #306 in Google Kickstart 2022 Round C.

## TECHNICAL SKILLS

### LANGUAGES & FRAMEWORKS

Day-to-Day:  
Python • C/C++ • JavaScript • React  
Familiar:  
LaTeX • HTML/CSS • Qiskit • React Native • Bash • Solidity • Racket • Mapbox JS

### MISCELLANEOUS

MySQL • MongoDB • Git

## RELEVANT COURSES

Operating Systems and Networks,  
Distributing Trust and Blockchain,  
Statistical Methods in AI,  
Software Systems, Data and Applications,  
Software Programming for Performance,  
Computer Systems Organization,  
Algorithm Analysis & Design,  
Compilers, Quantum Algorithms

## MAJOR PROJECTS

### WEB DEV AND DATA SCIENCE | NETCITY

- Cleaning and processing the data from the dataset for a city, then finding methods to predict the likelihood of failure of a pipeline using spatial data of the pipes, and surrounding factors for a city.

### PAULIZ | QHACK 22

- Simulated the Hamiltonian of the Heisenberg Spin Chain model using topologically optimized Trotterisation.
- Won the Quantum Chemistry Challenge in Qhack 22 for this project.

### DAPP MARKET | AUCTION-HOUSE

- A webapp for an online Auction House with proper payment and delivery system.
- Includes integration with Solidity back-end and truffle-react.

### FOOD DELIVERY APP | A SENIOR IS ASKING

- An application for food delivery by students and for students developed using React JS, Flask, Redis, Docker and REST APIs.

### LINUX SHELL | SEASHELL

- A Bash-like shell in C using Linux system calls.
- Included piping, redirection and signal handling.

## EXPERIENCE

### SMARTTERRA | ML INTERN

June 2021 – July 2021

- Worked on project Netcity, to build a ML model that could predict leakage in a pipeline given relevant data.
- Worked with jupyter notebooks, geopandas library, React native, Mapbox JS and Plotly JS.

### QINTERN | QISKIT CONTRIBUTION

July 2022 – Present

- Project 19 of the Qintern 22 programme.
- Reviewing the existing implementations of Multi-controlled NOT gate, implementing them using the qiskit framework, and at the top of it and writing a wrapper that chooses the best implementation given the size of the gate and the pre-specified resources allowed.

## POSITION OF RESPONSIBILITY

### IIIT PROGRAMMING CLUB | MODERATOR

July 2021 – June 2022

- Co-heading the club and in-charge of hosting and organizing events like Fools Programming, Decode and Codecraft. Responsible for club operations.

### TEACHING ASSISTANT

- **Discrete Structures:** December 2021 - March 2022
- **Data Structures and Algorithms:** March 2022 - Present