

Rutvij Menavlikar

rutvij.menavlikar@research.iiit.ac.in
menavlikarrutvij@gmail.com

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**

(Maximum rating 2015, *Candidate Master*)

ACHIEVEMENTS

- Selected in International Institute of Informatics Training Camp (2017)
- Ranked #62 in the 2020 ICPC Asia Gwalior-Pune Regional Contest.
- Ranked #306 in Google Kickstart 2022 Round C.
- Won the Quantum Chemistry Challenge in Qhack 22 sponsored by Qunsys.
- Won first prize in categories of Best Presentation and Best Project in QIntern 2022.
- Top 10 in Uber Hacktag 2.0 2022.

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

Quantum Information and Computation, Open Quantum Systems and Quantum Thermodynamics, Quantum Algorithms, Compilers, Algorithm Analysis & Design, Data and Applications, Machine Data and Learning, Distributing Trust and Blockchain, Statistical Methods of Artificial Intelligence

MAJOR PROJECTS

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.

QC JOURNAL | QUANTUM COMPUTING

- Made notes and implemented some basic Quantum Computing algorithms and protocols in python and jupyter notebooks with Qiskit library.

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 | ASENIORISASKING

- 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

QINTERN | QUANTUM SOFTWARE DEVELOPMENT INTERN

July 2022 – August 2022

- Building a python package to give the most efficient decomposition of a Multi-Controlled NOT gate, given the resources the user has.
- Language used: Python
- Framework used: Qiskit

QUANTUM WALKS | RESEARCH

June 2021 – Present

- Currently working on bounding mixing time of quantum walks on a physically realizable graph under Prof. Shantanav Chakraborty in CQST, IIIT Hyderabad.

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 - July 2022
- **Automata Theory:** August 2022 - Present