Abhay Saxena

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RESEARCH INTERESTS

Quantum Algorithms , Quantum Cryptography, Machine Learning, General Programming

EDUCATION

Degree	Institute	Board	CGPA/Percentage	Year
BS-MS	Indian Institute of Science Education and Research, Kolkata	-	7.57 (Till 5th Sem)	2021-26
Senior Secondary	Navyug Convent School Delhi	CBSE	92%	2021
Matriculation	Cambridge School Noida	CBSE	96.2%	2019

PROJECTS

- **Quantum Computing - Quantum Algorithms in Qiskit** *May - Jul 2023*
  Supervisor: Dr. Kuntal Roy (EECS Department, IISER Bhopal) **GitHub ● Presentation ● Report**
  – Title: Efficiency Comparison and implementation of VQE, VQD and p-VQD Algorithms in Qiskit
  – Studied in detail about various types of Eigensolvers, Time Evolver (p-VQD) Algorithms and other optimizer and amplifiers and customized implimentation of VQE, VQD and p-VQD in *ibmq_quito*.
- **Coding Project in Django, Nextjs and Javascript** *May - Jul 2023*
  Supervisor: Dr. Dwaipayan Roy (CDS Department, IISER Kolkata) **Report**
  – Title: Exploring and Implimenting a Robust Crediting Module in Canteen Management System
  – Integrating Cashfree and MobiKwik payment gateway system in Students mess credit system using Django(Python), NextJS and Javascript

TECHNICAL SKILLS

- **Programming Languages**:

  – Proficient in Python, C, MATLAB, Kotlin, Javascript

  – Familiar with C++, Java, R

- **Scripting Languages**: html/css/js, LaTeX, Numpy/Scipy/Matplotlib, React/NextJs
- **Tools and Frameworks**: Qiskit, Git, Tensorflow, flutter, Android Studio, Arduino, Blender, Django

RELEVANT COURSES

Quantum Mechanics, Nuclear Physics Laboratory, Quantum Chemistry I, Linear Algebra I, Mathematical Methods of Physics, Electrical Circuits and Electronics, Programming and Data Structures

STUDENT INTERESTS

- **Academic**

  – **Completed Machine learning Foundational Crash Course by Google AI**

  – Implemented Fundamental Quantum support vector machines using kernel tricks in Qiskit

- **Coding:**

  – **2023**:Completely coded and designed my **Personal Website** from scratch

  – **2022**: Kotlin Based YouTube client on android that allows modification to website functionality and background action using GeckoView (**GitHub**)

  – **2016**:Elegent Excercise App for spaced repeated timers and statistics, based on Cordova and updated to Webview (**GitHub**)

  – Arduino Projects: Nokia 5110 display based rickroll for pulling pranks , HC-05 and esp8266 based iot experiments

- **Music:**

  – Play Guitar and Piano fairly well

  – Music and covers on LMMS audio workstation(**Link**)

ACHIEVEMENTS

- **Programming and Data Structures Course Group Project** Outstanding Group Assignment Honourable Mention Certificate: Prof. Kripabandhu Ghosh, CDS IISER Kolkata (Nov 2023)
- Qualified JEE Advanced 2022
- Zonal topper for SOF National Cyber Olympiad Class 9, international rank 57 Class 7