



ABDUL AZIZ MANDAL

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🌐 **Website:** <https://github.com/AzizSimX>

Gender: Male **Date of birth:** 05/11/1999 **Nationality:** Indian

ABOUT ME

Master's graduate in Chemistry with a specialization in Physical Chemistry, passionate about molecular dynamics (MD) simulations. Experienced in computational modeling and data analysis, focusing on protein aggregation, protein-ligand interactions, and atomic-level dynamics. Eager to contribute to cutting-edge research in computational chemistry and drug design. My research goals include simulating complex protein systems and improving force field accuracy through machine learning and AI integration. Motivated to pursue a PhD to further advance this work in a collaborative and innovative research environment.

WORK EXPERIENCE

Name of unit or department: Jadavpur University | **Business or sector:** Education

[Current] **Project Assistant**

Investigated amyloid aggregation of single amino acids and its inhibition using small molecules, with a focus on tannin compounds; also studied the effect of pH on amyloid aggregation propensity. Aimed to contribute insights toward the development of therapeutic strategies for amyloid-related diseases.

Dr. Swapan Chakrabarti

Name of unit or department: University of Calcutta | **Business or sector:** Education

[01/03/2022 – 31/07/2022] **Project Student**

This project is on **"Quantum Cryptography: An IBMQ Experience"**. This *Quantum Cryptography* is a kind of encryption method uses quantum mechanics properties to secure and transfer data in a way that can't be hacked. In current progress quantum computers will be able to *break public encryption key* easily.

Using quantum processors circuit can be created programmatically with the *Jupyter notebook of Quantum Lab*. Using *Qiskit* circuits are created and compiled with **"OpenQASM"** for execution on quantum systems.

Dr. Indu Sharma

[06/2020 – 08/2020] **Project Student**

This project is on Interdisciplinary Studies " Evaluation of effect of oral contraceptives on certain miRNAs and stress induced pathway in endometrial and ovarian cancer cells in vitro."

EDUCATION AND TRAINING

[08/12/2020 – 14/09/2022] **MS in Chemistry**

University of Calcutta

City: Kolkata | **Country:** India | **Field(s) of study:** Physical Chemistry | **Final grade:** Overall- 81.30%, SGPA-8.13, GRADE-A+,FIRST CLASS | **Thesis:** This project is on "Quantum Cryptography: An IBMQ Experience". This Quantum Cryptography is a kind of encryption method uses quantum mechanics properties to secure and transfer data in a way that can't be hacked.

[03/07/2017 – 23/10/2020]

BS in Chemistry

Maulana Azad College (Affiliated by University of Calcutta)

City: Kolkata | **Country:** India | **Field(s) of study:** Chemistry Honours | **Final grade:** Overall-78.13%,FIRST CLASS

[2015 – 2017]

Higher Secondary Education

Tapan High School

City: Tapan | **Country:** India | **Field(s) of study:** Science Stream | **Final grade:** Overall-89.80%, FIRST CLASS

[2010 – 2015]

Secondary Education

Tapan High School

City: Tapan | **Country:** India | **Final grade:** Overall-85.71%, FIRST CLASS

LANGUAGE SKILLS

Mother tongue(s): Bengali

Other language(s):

English

LISTENING C1 READING C2 WRITING C2

SPOKEN PRODUCTION C1 SPOKEN INTERACTION C1

Hindi

LISTENING C2 READING C2

SPOKEN PRODUCTION C2 SPOKEN INTERACTION C2

Levels: A1 and A2: Basic user; B1 and B2: Independent user; C1 and C2: Proficient user

SKILLS

Advanced level of usage of GROMACS for molecular dynamics simulations | Good knowledge of molecular dynamics software package: AMBER | Visualization programs: VMD, Chimera, GaussView, PyMol | Experience in High Performance Computing | Experience in Python, Julia, Fortran Programming | AutoDock Vina | BIOVIA Discovery Studio Visualizer | LigPlot+ | IBM-Q Experience and Qiskit (an open-source Quantum Computing framework) | Microsoft Office

CONFERENCES AND SEMINARS

DBT Science Program Maulana Azad College

Physical Chemistry Physical Biology(PCCB)-2021 Kolkata

BoseStat@100 Salt Lake, Kolkata

HONOURS AND AWARDS

[20/12/2023]

INSPIRE Fellowship Awarding institution: Department of Science & Technology

Innovation in Science Pursuit for Inspired Research (INSPIRE) Scheme INSPIRE Fellowship, Department of Science & Technology (DST), Government of India has taken several pioneering initiatives for attracting meritorious students to study basic and natural sciences at the college and university level, and to pursue research careers in both basic

and applied science areas including engineering, medicine, agriculture and veterinary sciences.

[24/05/2018] **INSPIRE Scheme Scholarship for Higher Education (SHE) Awarding institution:** Department of Science & Technology

Innovation in Science Pursuit for Inspired Research (INSPIRE) Scheme Scholarship for Higher Education (SHE), Department of Science & Technology (DST), Government of India offered to pursue undergraduate (UG) studies and continue up to postgraduate(PG) studies, based on Class 12th standard examination results (top 1%) of respective Boards.

[2020] **IIT JAM Awarding institution:** Indian Institute of Technology Kanpur

HOBBIES AND INTERESTS

Coding

Book Collection

Nature and Wildlife Photography

INTERNSHIP

[07/2021] **International Summer Program**

Osaka University,Japan

[06/2021] **Energy Materials-Fundamentals to Device Fabrication**

CSIR CERI,Karaikudi

[06/2021] **Summer School on Quantum Information and Quantum Technology**

IISER Kolkata