MISBAH UZ ZAMAN

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About ME

I am a third-year research student at IISER Kolkata, majoring in mathematics. My academic journey has been marked by a pre-major focus on mathematics, physics and biology, showcasing my diverse interests. Currently, I am also pursuing a minor in computer science, reflecting my commitment to a multidisciplinary approach. With a solid foundation in these subjects, I am driven by a passion for learning and motivated to apply my knowledge through internships, seeking practical experiences to complement my theoretical understanding.

Education

Indian Institute of Science Education and Research, Kolkata 2021 to 2026

- 5 Year BS-MS Dual Degree Programme
- **Currently in the 6th Semester; Majoring in 'Mathematical Sciences'**

South point public school ,Maner, 2019 to 2020

- CBSE Higher Secondary Coursework: Class XI and XII

Christ church Diocesan School ,patna, 2018

- CBSE Higher Secondary Coursework: Class X

Courses Taken and References Used

Introduction to Computer Programming

- Eric Mathhes, Python Crash Course: A Hands-On, Project-Based Introduction to Programming

Introduction to Computation

- Steven C. Chapra, Numerical Methods for Engineers

Programming and Data Structures I

- Brian W. Kernighan and Dennis M. Ritchie, The C Programming Language ; Seymour Lipschutz, Data Structures

Programming and Data Structures II

- T. H. Cormen, C. L. Leiserson, R. L. Rivest, and C. Stein, Introduction to Algorithms ; Data Structures Through C in Depth. S.K.Srivastava, Deepali Srivastava.

Linear Algebra I,II

- Hoffman and Kunze, Linear Algebra

Probability I

- Ross, S., Introduction to Probability Models, Prentice-Hall

Analysis I,II,III,IV

- Rudin, W., Principles of Mathematical Analysis; Ajit Kumar and S Kumaresan, A Basic Course in Real Analysis; Micheal Spivak, Calculus on Manifolds; Gerald B. Folland, Real Analysis Modern Techneiques and their Applications

Algebra I (Group Theory)

- Dummit, D.S. and Foote, R.M., Abstract Algebra

Mathematical Methods (I, II)

- M.L. Boas, Mathematical Methods in the Physical Sciences; G. B. Arfken and H. J. Weber, Mathematical methods for physics

Graph Theory

- DOUGLAS B. WEST,Introduction to Graph Theory

Topology

- James R. Munkres, Topolgy

Statistics I

- ALVIN C. RENCHER, Methods of Multivariate Analysis

Algebra II(RING THEORY)

- Dummit, D.S. and Foote, R.M., Abstract Algebra Analysis

Special Relativity

- Robert Resnick, Introduction to Special Relativity

Waves and Optics

- F. S. Crawford, Waves (Berkeley Physics Course)

Quantum Mechanics I

- D. J. Griffiths, Introduction to Quantum Mechanics.

Thermodynamics

- S.C. Garg, Thermal Physics – with Kinetic Theory, Thermodynamics and Statistical Mechanics

Projects

Made a CLI Inventory and E-commerce Management System
Key Concepts and Technologies Utilized : User Authentication , File Handling , Modular Programming , Data Structures , Error Handling , Dynamic Memory Allocation , Conditional Statements and Loops.
Received a Certificate of Appreciation for the successful development and implementation of the Project.

Additional Courses Taken

Principles of Microeconomics(MIT 14.01)

Introduction to Deep Learning(MIT 6.S191)

SKILLS

Skilled in Python programming language : quite familiar with libraries like NumPy, SciPy, matplotlib, Pandas, etc

Skilled in Machine Leaning algorithms: using python libraries including Scikit-Learn

Skilled in C programming language : efficient in coding and problem solving using C.

Data Structures and Algorithms using C : Quite profficient in DSA using C.

Proficiency in working with Gnuplot, Data Studio, LaTEX, Excel, Matlab, Origin software.

Frontend Developement : proficient in HTML5,CSS and Javascript.

Deep and reinforcement learning : Solid grasp of deep learning concepts: Perceptrons, CNN, RNN, GAN;
Applied optimization techniques: Gradient Descent, Backpropagation; Familiarity with advanced neural network architectures: Autoencoders, VAE, Liquid NN.