

Mushir Uz Zaman

Mathematics with Computer Science Graduate

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Delhi, India

PROFILE

M.Sc. Mathematics with Computer Science graduate from Jamia Millia Islamia, New Delhi, with a B.Sc. background centred on Mathematics. Academic work combines proof-based mathematics, numerical methods, C and Java programming, data structures, operating systems, and database systems. Interested in AI training and review work requiring careful step-by-step reasoning, code interpretation, scientific thinking, and clear feedback in Hindi and professional English.

EDUCATION

M.Sc. Mathematics with Computer Science

Jamia Millia Islamia, New Delhi | Completed

Coursework spans advanced analysis, algebra, topology, geometry, numerical methods, C/Java programming, data structures, operating systems, web designing, and database management systems.

B.Sc. in Mathematics

Vinoba Bhave University, Jharkhand | Completed

Mathematics was the main subject. Coursework covered calculus, algebra, analysis, differential equations, group/ring theory, numerical methods, multivariate calculus, metric spaces, complex analysis, and linear algebra; Physics and Chemistry were elective subjects.

CORE STRENGTHS AND COURSEWORK

Mathematics: Real Analysis, Abstract Algebra, Topology, Linear Algebra, Differential Equations and Applications, Numerical Analysis, Functional Analysis, Complex Analysis, Differential Geometry, Differentiable Manifolds, Wavelet Analysis, Mechanics, Calculus, Theory of Real Functions, Group Theory, PDEs and systems of ODEs, Riemann Integration and Series of Functions, Ring Theory, Multivariate Calculus, and Metric Spaces.

Mathematical topics: Measure and integration, groups and rings, vector spaces, boundary-value problems, approximation, proof-based reasoning, hyperbolic functions, Leibniz rule, L'Hôpital's rule, curve tracing, matrices and rank, De Moivre's theorem, sequences and series, convergence tests, exact and Bernoulli equations, Rolle's and mean value theorems, Lagrange's theorem, Lagrange and Charpit methods, interpolation, Newton-Raphson method, Green's/Stokes'/Gauss theorems, Sylow theorems, Cauchy-Riemann equations, eigenvalues, eigenvectors, and inner product spaces.

Coding: C programming with control flow, arrays, strings, pointers, functions, recursion, structures, and file handling. Java programming with object-oriented programming, classes, inheritance, polymorphism, interfaces, collections, and exception handling.

Computer Science: Data structures and algorithms in C/Java — arrays, linked lists, stacks, queues, trees, graphs, searching, sorting, and complexity. Operating Systems — processes, scheduling, synchronization, deadlocks, memory management, and file systems. DBMS — relational model, ER diagrams, normalization, transactions, and SQL.

Physics: Bachelor-level elective study of mechanics, motion, waves, optics, electricity and magnetism, measurement, and mathematical modelling of physical systems.

Chemistry: Bachelor-level elective study of physical, organic, and inorganic chemistry, supported by quantitative observation and scientific concepts.

Languages: Hindi — native; English — professional proficiency for academic and technical communication.

PROJECTS

Study of Three Generalized Fixed Point Theorems

Academic Mathematics Project

- Studied three generalized fixed point theorems with attention to mappings, metric spaces, convergence conditions, and proof-based reasoning.
- Developed a structured understanding of how assumptions and iterative sequences lead to stable solutions in fixed point theory.

ONLINE COURSES AND CERTIFICATES

Python Certificate | Kaggle Learn

Click the title to view the completed certificate. Covered functions, conditionals, loops, lists, strings, dictionaries, and libraries.

Intro to Machine Learning Certificate | Kaggle Learn

Click the title to view the completed certificate. Covered model building, validation, underfitting/overfitting, and random forests.

Python Practice | HackerRank

Click the title to view Python practice questions.

SQL Practice | HackerRank

Click the title to view SQL practice questions.

Algorithmic Problem Solving | LeetCode

Regular coding-question and algorithmic problem practice.

TECHNICAL SKILLS

Mathematics · C · Java · Python · SQL · Data Structures · Algorithms · DBMS · Operating Systems · HTML · CSS · JavaScript · Machine Learning

LANGUAGES

Hindi — Native | English — Professional proficiency

PROFESSIONAL PROFILES

GitHub · LinkedIn · Kaggle · HackerRank · LeetCode