Elementary Linear Algebra

(Undergraduate Text)

About the Book: The book is intended to serve the student as a map through the introductory linear algebra course. To that end, it delivers an elementary treatment of linear algebra - suitable for a beginner course for undergraduate students. Our journey shall take us through vectors, matrices and their connection to systems of linear equations, Gauss-Jordan elimination, eigenvalues, and diagonalization. Students embarking on a linear algebra course should have a comprehensive knowledge of matrices and vectors. The examples and exercises have been cautiously curated to maintain a symmetry between theory and practice.

Over the course of five chapters, the book traverses the fundamental material canvassed by most elementary linear algebra courses like vectors, matrices, system of linear equations, eigenvalues, and diagonalization. The gears change in Chapter 5 as students reach the introduction of vector spaces and linear transformations. To supplement this core, we have also included six appendices devoted to trace and determinant of a matrix, minors and cofactors, adjoint of a matrix, applications of linear equations, LU decomposition, and finally, computer graphics. The aim is to present the student with the essentials of linear algebra in the most lucid and crystalline fashion.

About the Authors: **Prof. Dinesh Khattar** is currently Principal of Kirori Mal College, University of Delhi. He topped and secured the Gold Medal in his B.Sc. as well as M.Sc. exams at Delhi University. He is a member of the Academic Council, Delhi University, the highest academic body of the University. He was awarded the Dr. S. Radhakrishnan Memorial National Teacher's Award in 2015 for his contribution in the field of education. He was also conferred with the prestigious Commonwealth Scholarship for pursuing research in UK. His active involvement in research has allowed him to present papers in eminent international conferences across the globe. Dr. Khattar has been a member of the curriculum development committee for B.Sc. and M.Sc. programs at various universities, including the University of Delhi. He is also an author of more than twenty books on Mathematics including the International Editions: Group Theory and Ring Theory published by Springer Germany and Linear Algebra published by Ane Books.

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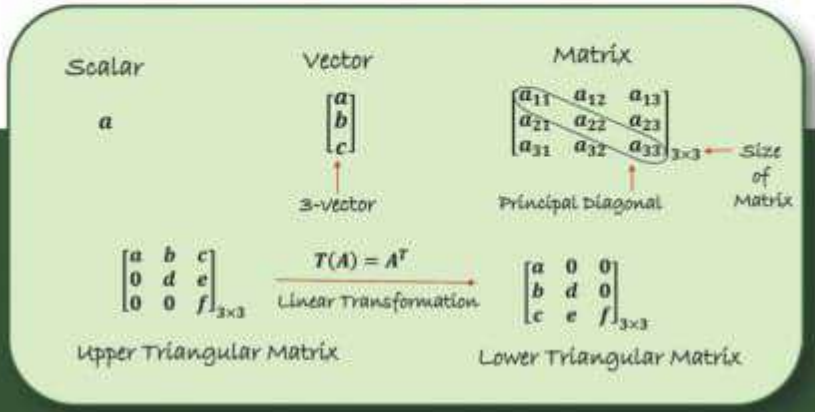

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