



Linear Algebra

Section 1 - Operations on One Matrix

Section 2 - Operations on Two Matrices

Section 3 - Matrices as Vectors

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Section 11 - Orthonormal Bases and Gram-Schmidt

Section 12 - Eigenvalues and Eigenvectors

Section 1 - Operations on One Matrix

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Gaussian Elimination

Representing Systems with Matrices

Solving Linear Systems in Two Unknowns

Solving Linear Systems in Three Unknowns

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The Nature of Solutions to a Linear System

Section 2 - Operations on Two Matrices

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Matrix Multiplication

Identity Matrices



Section 3 - Matrices as Vectors

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Section 4 - Dot Products and Cross Products

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Section 5 - Matrix-Vector Products

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Linear Transformations as Matrix-Vector Multiplication
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Section 7 – Inverses

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The Determinant of a 3×3 Matrix

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The Determinant When Rows Multiplied by a Scalar

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Section 9 – Transposes

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Section 10 - Orthogonality and Change of Basis

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Orthogonal Complements of Fundamental Subspaces

Orthogonal Complements of Fundamental Subspaces

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Section 11 - Orthonormal Bases and Gram-Schmidt

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Section 12 - Eigenvalues and Eigenvectors

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Finding Eigenvalues

Finding Eigenvectors

Eigenspaces