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**Linear Algebra - Foundations to Frontiers**

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| Course | Progress | Dates | Discussion | Syllabus | Outline | laff routines | Community |

🏠 Course / Week 6: Gaussian Elimination / 6.1 Opening Remarks                🕐

| ‹ Previous | ✏️ ✓ | 📖 ✓ | 📖 ✓ | Next › |

## 6.1.2 Outline

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**Opening Remarks**

- 6.1.1. Solving Linear Systems
- 6.1.2. Outline
- 6.1.3 What You Will Learn

**Gaussian Elimination**

- 6.2.1. Reducing a System of Linear Equations to an Upper Triangular System
- 6.2.2. Appended Matrices
- 6.2.3. Gauss Transforms
- 6.2.4. Computing Separately with the Matrix and Right-Hand Side (Forward Substitution)
- 6.2.5. Towards an Algorithm

**Solving Ax = b via LU Factorization**

- 6.3.1. LU factorization (Gaussian elimination)
- 6.3.2. Solving Lz = b (Forward substitution)
- 6.3.3. Solving Ux = b (Back substitution)
- 6.3.4. Putting it all together to solve Ax = b
- 6.3.5. Cost

**Enrichment**

- 6.4.1. Blocked LU Factorization

**Wrap Up**

- 6.5.1. Homework
- 6.5.2. Summary

| ‹ Previous | Next › |

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