

Help

laff routines **Community** ( 🕋 Course / Week 3: Matrix-Vector Operations / 3.1 Opening Remarks Previous Next > 3.1.3 What You will Learn ☐ Bookmark this page 3.1.3 What You will Learn Upon completion of this unit, you should be able to Recognize matrix-vector multiplication as a linear combination of the columns of the matrix.

- Given a linear transformation, determine the matrix that represents it.
- Given a matrix, determine the linear transformation that it represents.
- Connect special linear transformations to special matrices.
- Identify special matrices such as the zero matrix, the identity matrix, diagonal matrices, triangular matrices, and symmetric matrices.
- Transpose a matrix.
- Scale and add matrices.
- Exploit properties of special matrices.
- Extrapolate from concrete computation to algorithms for matrix-vector multiplication.
- Partition (slice and dice) matrices with and without special properties.
- Use partitioned matrices and vectors to represent algorithms for matrix-vector multiplication.
- Use partitioned matrices and vectors to represent algorithms in code.

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