Key topics so far (in one page!)

- Basic properties of matrices, subspaces, norms, inner/outer products
- Matrix rank
- Linear independence and dependence
- Range
- Nullspace
  \( \text{rank}(A) + \text{dim Null}(A) = n \)

Linear equations
- Finding all solutions
- Geometry
- Existence/uniqueness of solutions

Least squares problems
- Optimization formulation
- Normal equations
- Geometry
- Existence/uniqueness of solutions

Orthogonality
- Projections
- Gram-Schmidt
- Projection interpretation of least squares