AINT351 - Principle Component Analysis

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PCA

- Look the data and see if it can find better values for the axis
- Eigenvectors/values is a non-zero vector that does not change its direction when a linear transformation is applied to it
  - They're only scaled by the transformation
  - Defined as the root of the equation
- The L priniciple components are the K eigenvectors with the largest eigenvalues of the data covariance matrix
- If we can find the things that stay the same but only scale then we've found the eigenvalue

Finding eigenvalues and eigenvectors

- Have to solve the equation to get the eigenvector/value
- Priniciple components are found by caluclating the eigenvectors and eigenvalues of the data covariance matrix
  - Largest is PCA 1