Motivation I: Data Compression
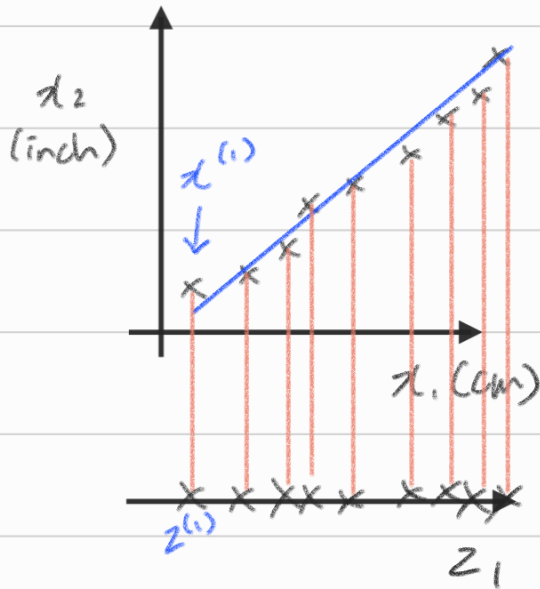
차원 축소
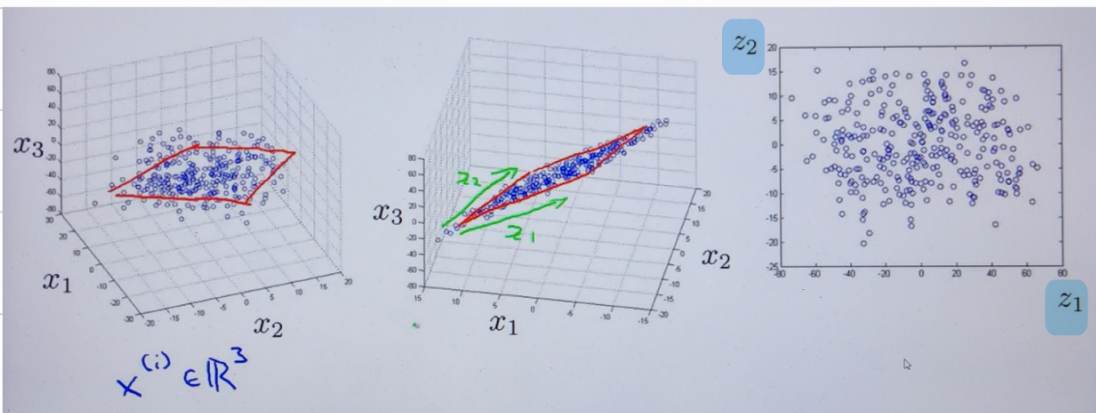

Reduce data from 2D to 1D

$$x^{(1)} \in \mathbb{R}^2 \rightarrow z^{(1)} \in \mathbb{R}$$
$$x^{(m)} \quad\quad \rightarrow z^{(m)}$$

∴ Allow us our learning algorithms
run more quickly as well

$x^{(i)} \in \mathbb{R}^3$

Reduce data from 3D to 2D

Motivation II: Visualization ∴ Plot and understand better

ex. $x^{(2)} \in \mathbb{R}^{50} \rightarrow z^{(i)} \in \mathbb{R}^2$ 50D to 2D