

CHO3-01

<Vector>
 $\vec{u} \in \mathbb{R} = \begin{pmatrix} u_1 \\ u_2 \\ \vdots \\ u_n \end{pmatrix} \leftarrow \text{Column Vectors. } (\mathbb{R}^2, \text{좌표공간})$
Row Vectors $\rightarrow \vec{u} (u_1 \ u_2 \cdots u_n)$

<Transposes of Vectors>

$\vec{u} = \begin{pmatrix} u_1 \\ u_2 \\ \vdots \\ u_n \end{pmatrix} \rightsquigarrow \vec{u}^T = (u_1 \ u_2 \cdots u_n)$ $A^T \leftrightarrow A^T$
Transposes

<Vector Norms (L_2 Norms)> \rightarrow 크기.

$\|\vec{u}\| = \sqrt{(u_1)^2 + (u_2)^2}$ \leftarrow 가용적인 벡터 크기 규하는 공식.

$\|\vec{u}\| = \sqrt{\sum_{i=1}^n (u_i)^2}$ $\rightsquigarrow \vec{u}$ 의 전체 크기를 구할 수 있는 공식

<Scalar Multiplications of Vectors>

\rightarrow 상수 곱하기.

<Unit Vector>

$\|\vec{u}\| = 1$ 일 때.

Vector Unitizations.

$$\frac{\vec{u}}{\|\vec{u}\|} = \frac{u}{\|\vec{u}\|}$$

\rightarrow 단위 벡터 ($\times 1$ (hat))