

Lecture 1: Introduction

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Mathematics for Machine Learning
KAIST EE

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Basic Notations

- Scalars: $a, b, c, \alpha, \beta, \gamma$
- Vectors: $\mathbf{x}, \mathbf{y}, \mathbf{z}$
- Matrices: $\mathbf{X}, \mathbf{Y}, \mathbf{Z}$
- Sets: $\mathcal{A}, \mathcal{B}, \mathcal{C}$
- (Ordered) tuple: $B = (\mathbf{b}_1, \mathbf{b}_2, \mathbf{b}_3)$
- Matrix of column vectors: $\mathbf{B} = [\mathbf{b}_1, \mathbf{b}_2, \mathbf{b}_3]$
- Set of vectors: $\mathcal{B} = \{\mathbf{b}_1, \mathbf{b}_2, \mathbf{b}_3\}$
- $\mathbb{R}, \mathbb{C}, \mathbb{Z}, \mathbb{N}, \mathbb{R}^n$

Questions?

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