Lecture 1: Introduction

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Mathematics for Machine Learning
KAIST EE

MONTH DAY, 2021

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- Scalars: $a, b, c, \alpha, \beta, \gamma$

- Vectors: $\boldsymbol{x}, \boldsymbol{y}, \boldsymbol{z}$

- Matrices: $\boldsymbol{X}, \boldsymbol{Y}, \boldsymbol{Z}$

- Sets: $\mathcal{A}, \mathcal{B}, \mathcal{C}$

- (Ordered) tuple: $B = (\boldsymbol{b}_1, \boldsymbol{b}_2, \boldsymbol{b}_3)$

- Matrix of column vectors: $\boldsymbol{B} = [\boldsymbol{b}_1, \boldsymbol{b}_2, \boldsymbol{b}_3]$

- Set of vectors: $\mathcal{B} = \{\boldsymbol{b}_1, \boldsymbol{b}_2, \boldsymbol{b}_3\}$

- $\mathbb{R}, \mathbb{C}, \mathbb{Z}, \mathbb{N}, \mathbb{R}^n$

Questions?

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