

## 1 Fields and spaces

$$\mathbb{K}, \mathbb{N}, \mathbb{Z}, \mathbb{Q}, \mathbb{I}, \mathbb{R}$$

## 2 Analysis

$$|x|$$

## 3 Linear Algebra

$$\langle x, y \rangle, \|A\|, \text{Tr} X, \text{MMD}_{\mathcal{H}}(S, P)$$

## 4 Operators

$$\mathbb{E}, \text{Var}, \mathcal{H}, \mathbb{E}[X], \mathbb{E}_X[Y], \text{Var}[X], \text{Cov}[X], \text{Var}_X[Y], \mathbb{P}(X), \mathbb{P}_X(Y)$$

## 5 Optimisation

$$\arg \min_a, \arg \max_b, \text{ess sup}_c, \text{dom}_d, \text{prox}_f$$

## 6 Set building

$$\left\{ x \in X \mid \frac{\sqrt{x}}{x^2 + 1} > 1 \right\}$$

## 7 ML Utilities

$$(\mathbf{x}_i, y_i)_{i=1}^n$$