

Type-1 Decision Functions Tutorial Exercise

Find the regions where the two dimensional vectors of Ω_1, Ω_2 and Ω_3 can belong to, so that they can be separated by the type 1 decision functions:

$$\begin{aligned}d_1(\mathbf{x}) &= -x_1 + x_2, \\d_2(\mathbf{x}) &= -x_1 + x_2 - 5, \\d_3(\mathbf{x}) &= -x_2 + 1.\end{aligned}$$

In which class does $\mathbf{x}_t = [4, 3]^T$ belong to?