

Type-3 Decision Functions Tutorial Exercise

Find the regions where the two-dimensional populations Ω_1 , Ω_2 and Ω_3 belong to, so that they can be separated using the type 3 decision functions:

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

Classify the vector $[1, 1]^T$.