Decomposition-based Approach

$$G_1 = (g_1(\boldsymbol{x}_1), g_1(\boldsymbol{x}_2), \ldots, g_1(\boldsymbol{x}_5))$$
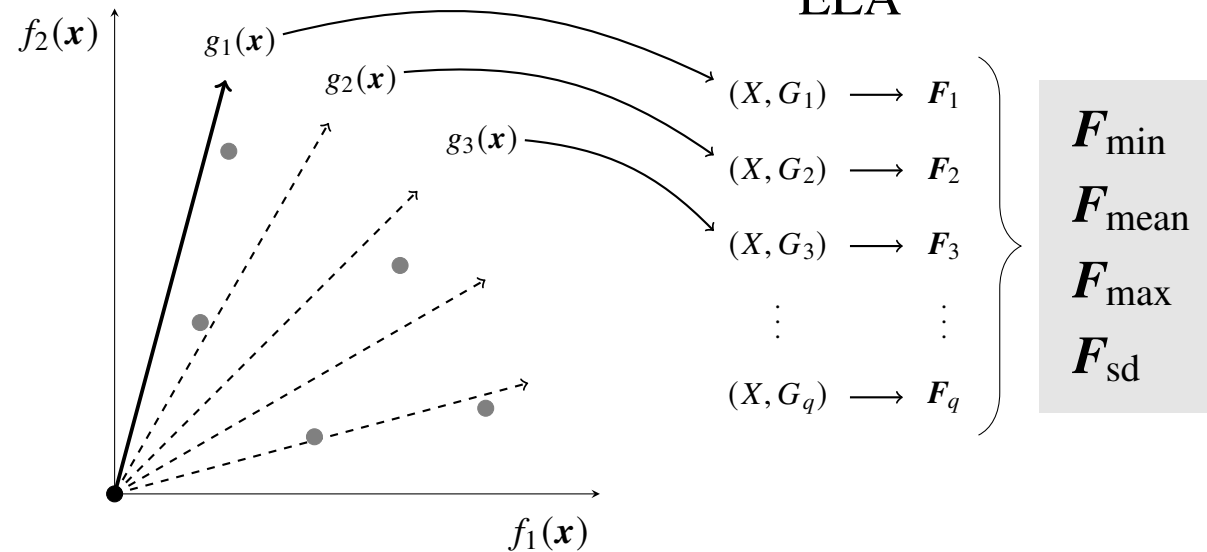
NDS-based Approach

$$R = (rank(\boldsymbol{x}_1, X), rank(\boldsymbol{x}_2, X), \ldots, rank(\boldsymbol{x}_5, X))$$