$$f(\mathbf{x}) = \mathbf{x}^{\mathsf{T}} \mathbf{A} \mathbf{x}$$

$$g_1(\mathbf{x}) = -x_1^2 + x_2 \le 0$$

$$g_2(\mathbf{x}) = -x_1 + x_2 - 2 \le 0$$

$$x_2$$

$$\nabla f(\mathbf{x})$$

$$\nabla f(\mathbf{x})$$