

# 人工智慧導論 HW2

許博翔

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**Problem 1.**  $\max(1-y\mathbf{w}^T\mathbf{x})^2 = \begin{cases} (1 - \mathbf{w}^T\mathbf{x})^2 = 1 - 2y\mathbf{w}^T\mathbf{x} + y^2(\mathbf{w}^T\mathbf{x})^2 = 1 - 2y\mathbf{w}^T\mathbf{x} + (\mathbf{w}^T\mathbf{x})^2, & \text{if } y \\ 0, & \text{otherwise} \end{cases}$