

Range-based Searches

Consider points in 2D: $\mathbf{p} = \{\mathbf{p}_1, \mathbf{p}_2, \dots, \mathbf{p}_n\}$.

Q: What points are in the rectangle:
[$(\mathbf{x}_1, \mathbf{y}_1), (\mathbf{x}_2, \mathbf{y}_2)$]?

Q: What is the nearest point to $(\mathbf{x}_1, \mathbf{y}_1)$?

