

# 題目: A study of Efficient GNSS Coordinate Classification Strategies for Epidemic Management

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Point in Polygon: 一個點是否在多邊形

K-Nearest Neighbors: 分類, 常用於機器學習

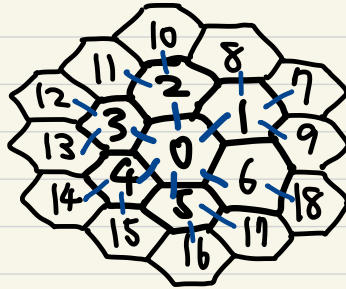
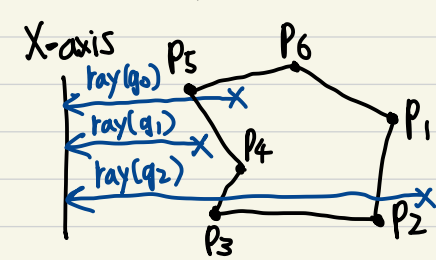
以疫情為出發點, 做出要追蹤的人在什麼區域。GNSS預測人在什麼位置。

PIP

- These methods can generally be distinguished by two types: the ray casting and winding number.
- It need the edges of a polygon to evaluate a node is inside or outside of this polygon.
- KNN classification exhibits several remarkable properties.
- The classification is available in various fields, including data mining algorithms and artificial intelligence (AI).
- Containing a number of training data points and a test data point to evaluate the class of the test point.

PIP-the ray method

One-Area and Cell/Rectangle Based PIP



System Model

(a) Positioning: Targets with mobile devices  $\rightarrow$  Storage of unclassified  
 $\rightarrow$  Server with considered area  $\rightarrow$  Storage of classified points

(b) Classification:

