

簡單利用Go語言處理機器學習



Yi-Hsien Chen @frozenkp 國立交通大學資工系



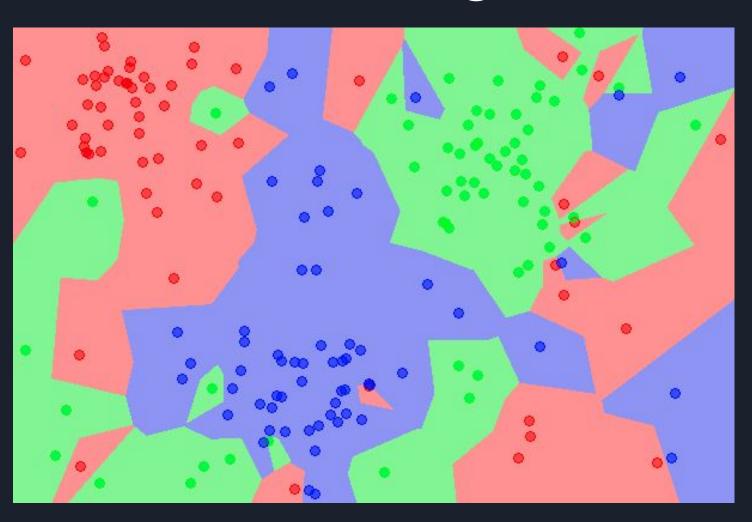
Golearn

a "batteries included" machine learning library for Go.

Methods

- Decision Tree
- KNN
- Bayes
- Linear Regression
- Neural Network

K Nearest Neighbors



Paramemter

Distance

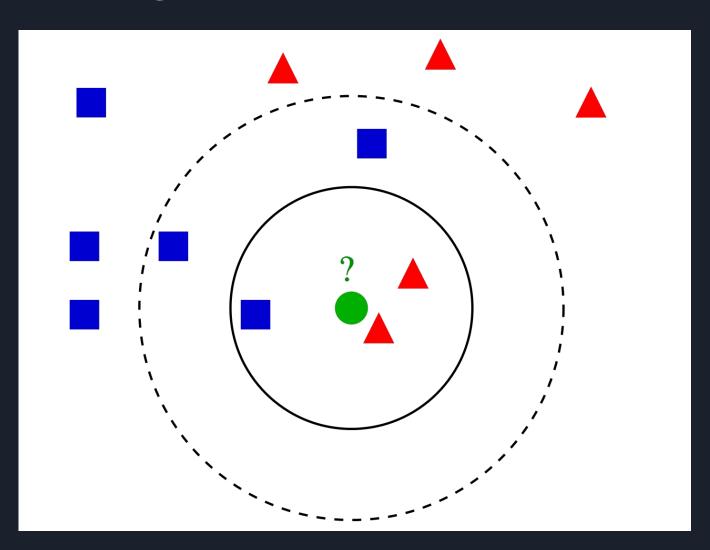
- manhattan
- euclidean
- cosine

Search

- linear
- kdtree
- balltree (soon)

$$^{n}\sqrt{(|x_{1}-y_{1}|^{n}+...+|x_{m}-y_{m}|^{n})}$$

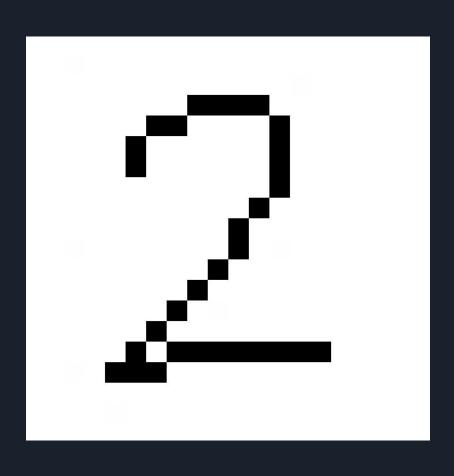
Weighted KNN



Demo

Handwriting recognition with KNN

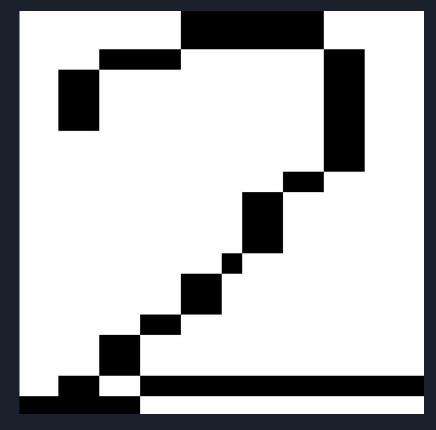
Preprocessing



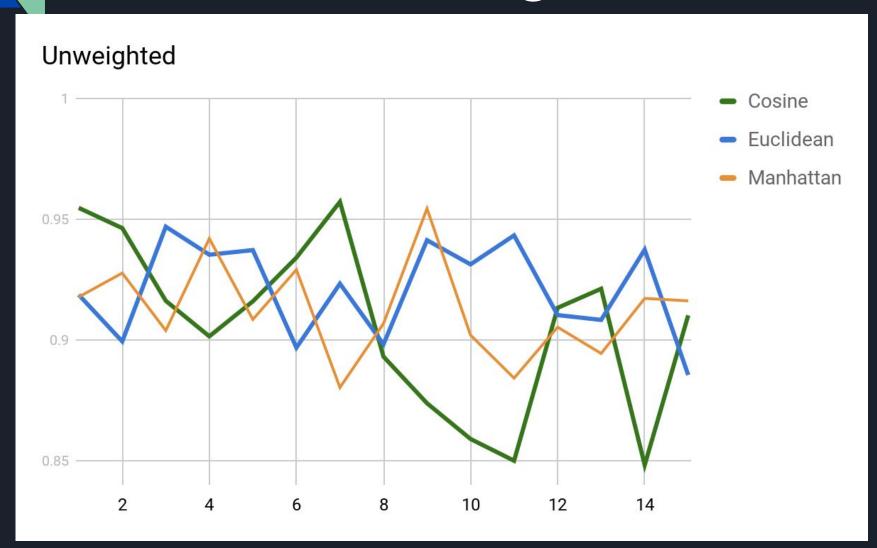
```
000000000000000000000
000000011110000000
0000001100001000000
0000010000001000000
0000010000001000000
0000000000001000000
0000000000010000000
0000000001000000000
00000000001000000000
00000000100000000000
00000001000000000000
00000010000000000000
000000100000000000000
00000101111111100000
00001110000000000000
000000000000000000000
```

Preprocessing





Model Training



Model Training

