

Algokarto Projekt

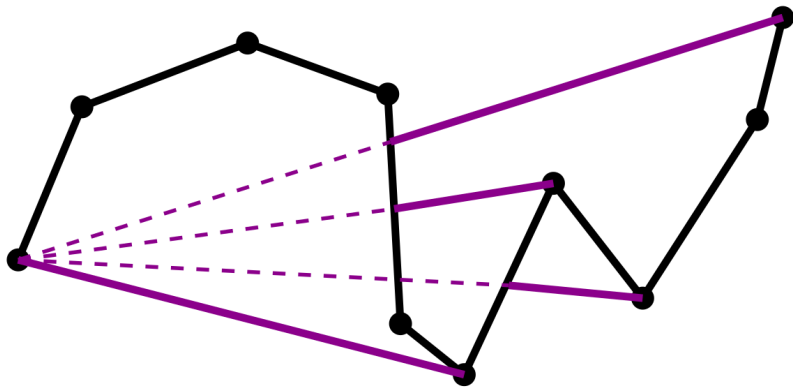
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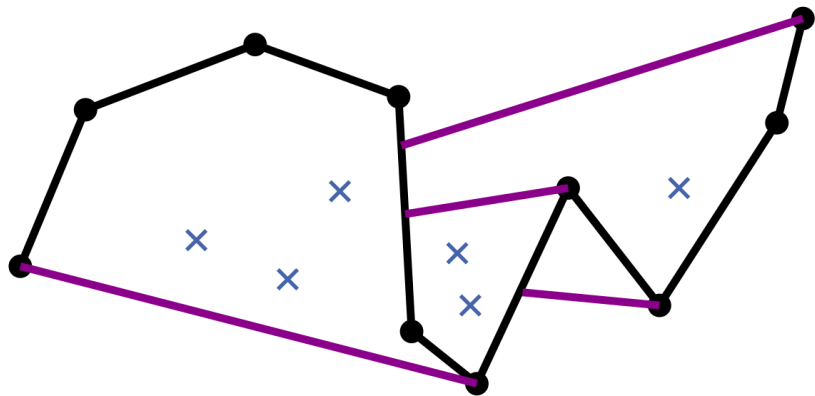
- Tangentensplitter berechnen
- Punkte verteilen
- konsistente Shortcuts filtern

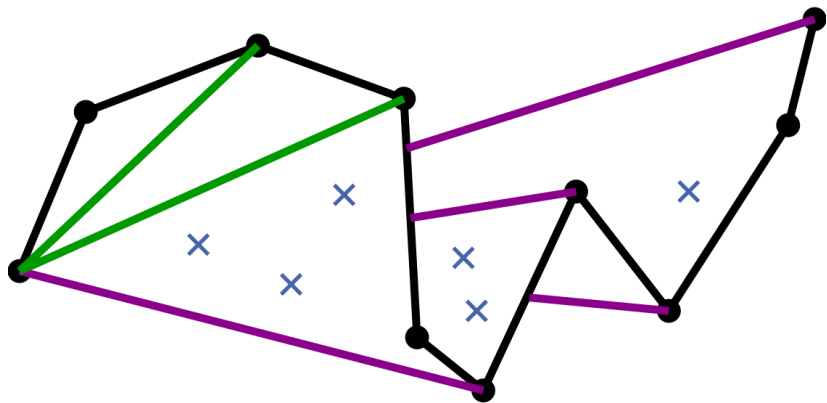
Laufzeit

$$O(N(N + M)\log(N))$$

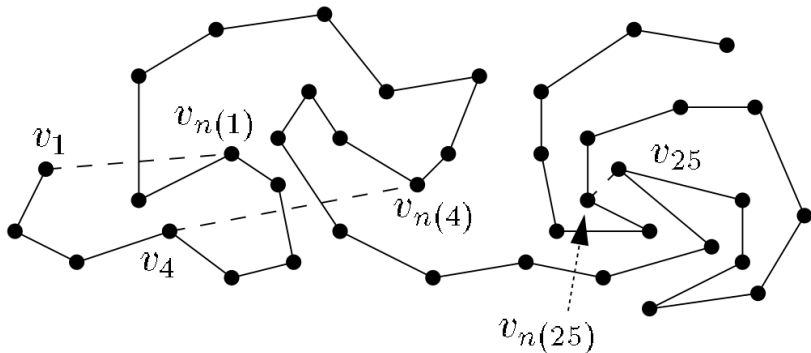


de Berg Algorithmus - Punkte verteilen





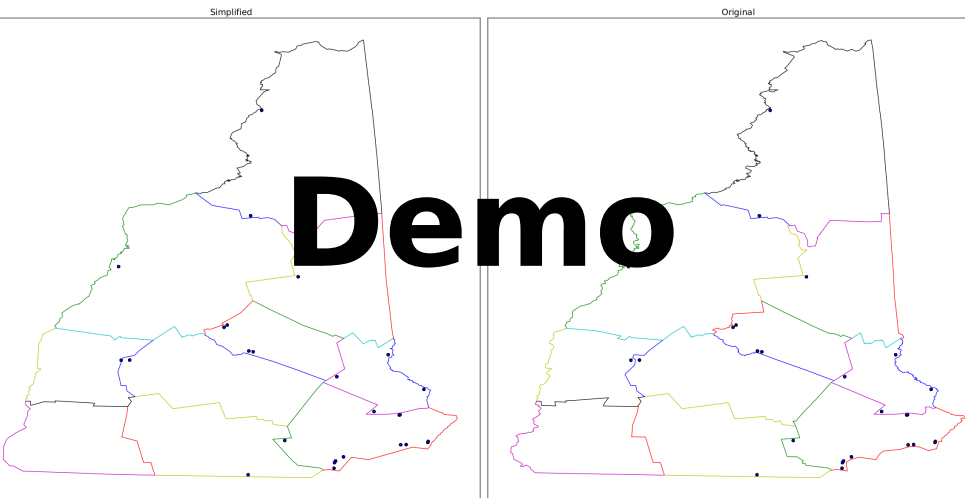
- **Problem:** Algorithmus nur auf x-monotone Polygonzüge definiert
- **Lösungsansätze:**
 - Koordinatentransformation und Auftrennen
 - längsten Teilpolygonzug für jeden Punkt



- Python, unoptimiert
- starke Orientierung an Semantik des Pseudocodes
- "Prosa"-pseudocode kann ausarten: *"search in T to find the leftmost edge $\overline{v_k v_{k+1}}$ to the right of p and on the sweep-line"*

```
1 def findLeftMostEdgeRightOfP(T,p,Ci):
2     sweepline = getSweepLine(Ci,p)
3     toDelete = []
4     result = None
5     found = False
6     i = 0
7     while not found and i < len(T):
8         if intersect(...):
9             intersection = intersectionPoint(...)
10            if intersection[0] > p[0]:
11                found = True
12                result = T[i]
13            else:
14                toDelete.append(T[i])
15            i+=1
16        for e in toDelete:
17            T.remove(e)
18        return result
```

Datensatz	Kantenzüge	Vereinfachung
1	27	965 → 494 → 336
2	46	1518 → 710 → 494
BaWü	5809	451145 → 109580 → 56656



- Engineering
- Erweiterungen?
- ...