

Convex Hull

Extreme Edges

- Definition

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Extreme Edges

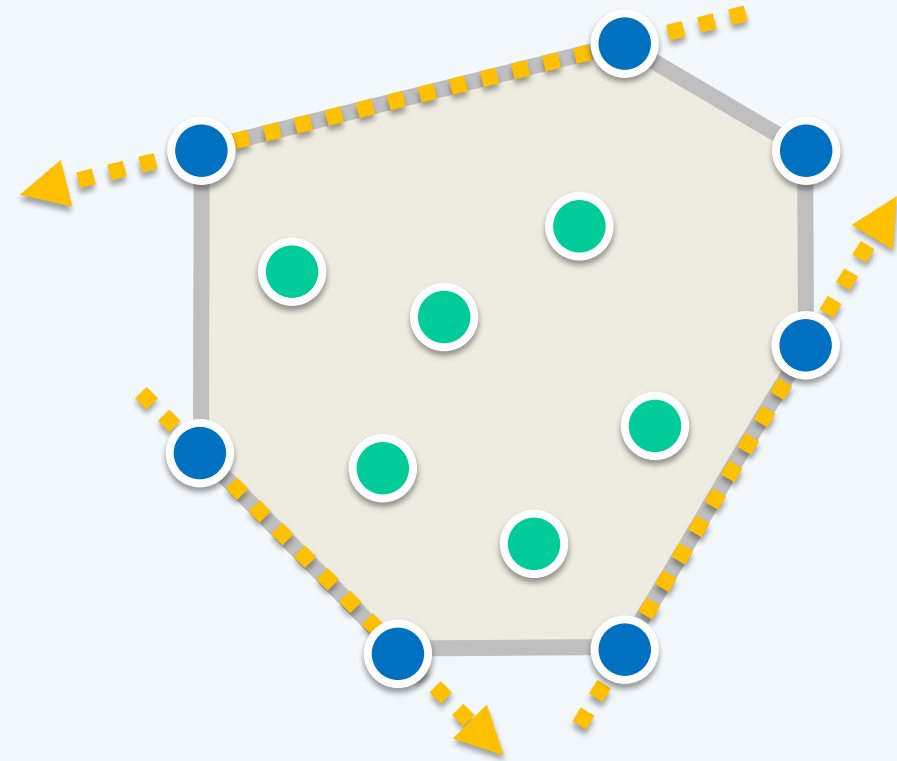
❖ The EP method

- requires $\mathcal{O}(n^4)$ time
to identify all EP's and
- needs additionally $\mathcal{O}(n \log n)$ time
to sort them into $\text{CH}(P)$

❖ How to improve it?

❖ All edges of $\text{CH}(P)$ are called

extreme w.r.t. S



To-Left Tests

❖ How to find all the EE's?

❖ For $s \in S$ and $t \in S$,

$e = (s, t)$ is an EE of $CH(P)$ iff

all points in $S \setminus \{s, t\}$ lie

to the **same side** of e

❖ Ambiguity: collinear points

