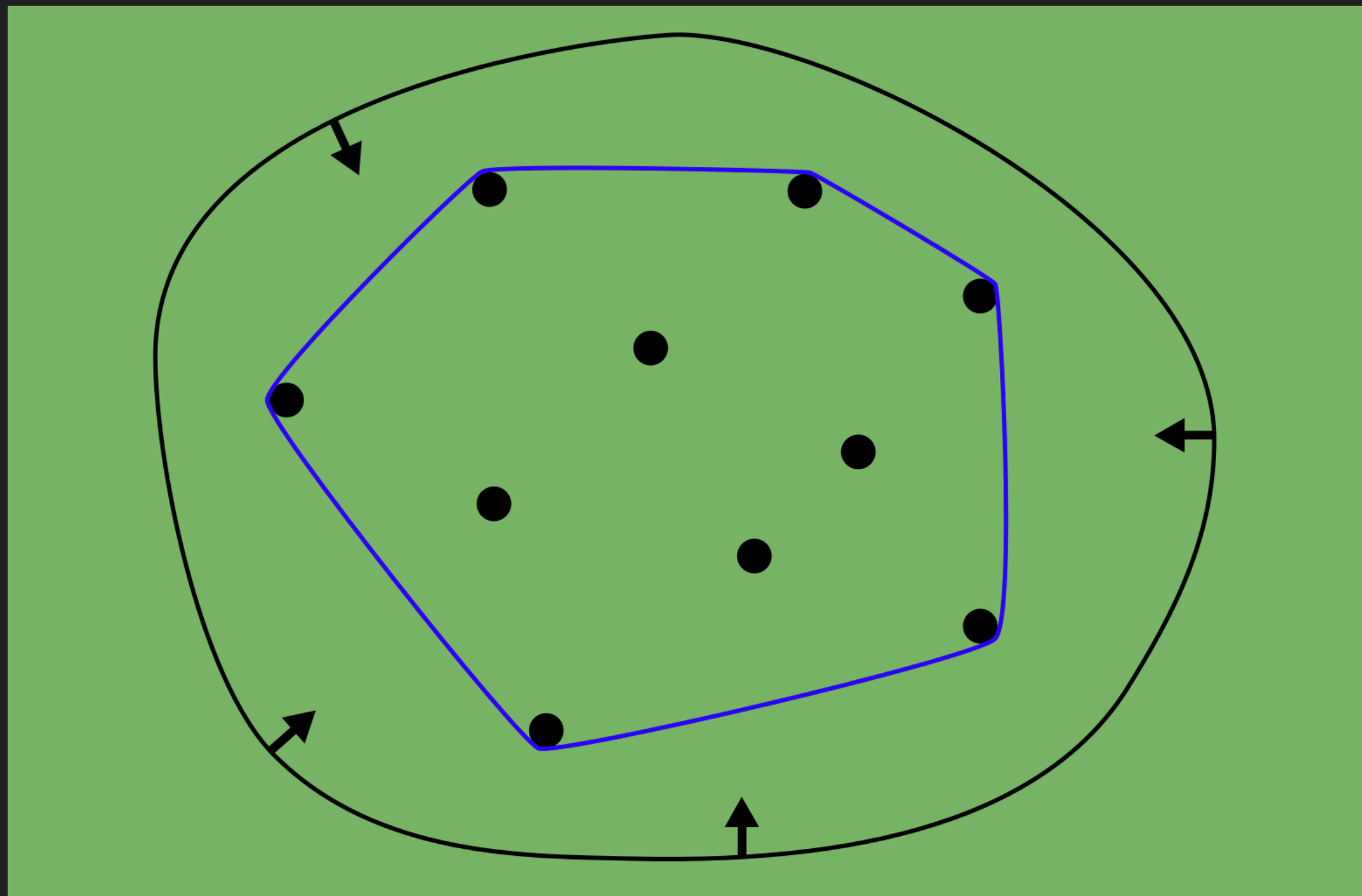


PARALLEL ALGORITHMS FOR FINDING CONVEX HULLS IN 2D

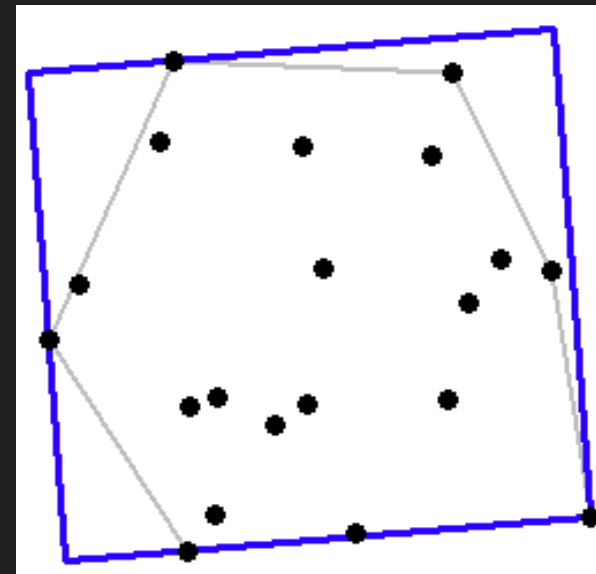
DEFINITION



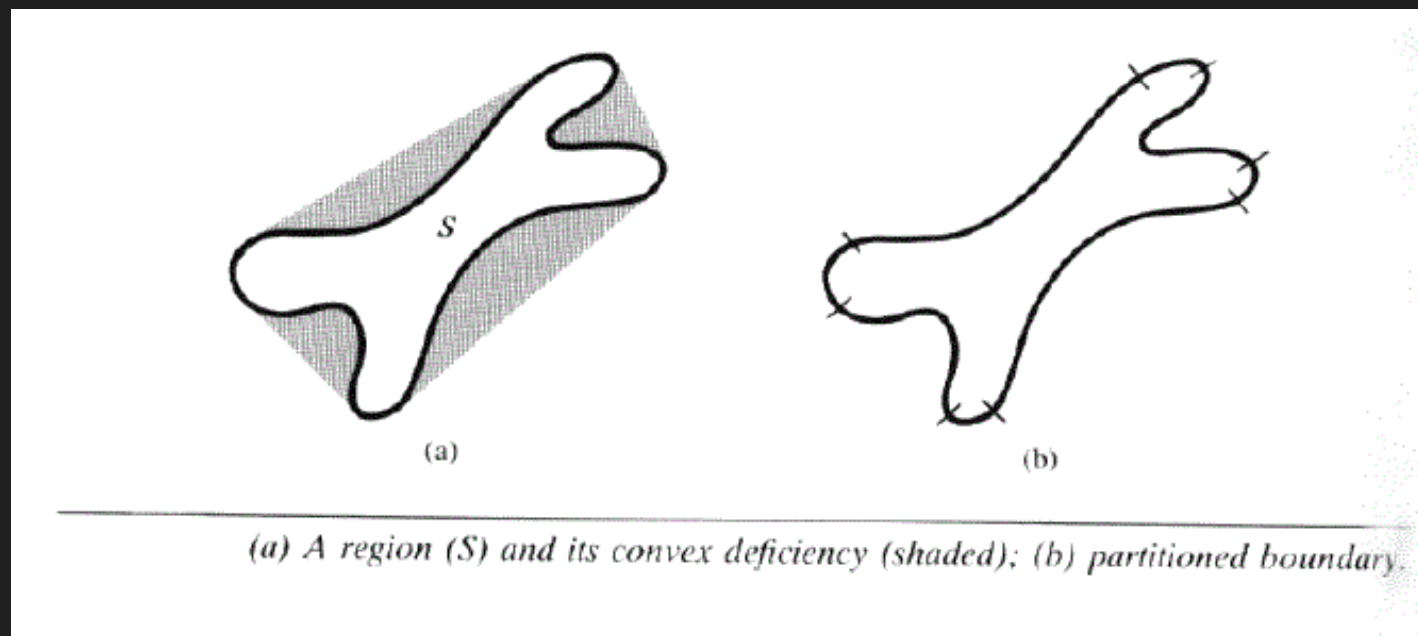
APPLICATIONS



COLLISION AVOIDANCE



SMALLEST BOX



(a) A region (S) and its convex deficiency (shaded); (b) partitioned boundary.

SHAPE ANALYSIS

PLAN OVERVIEW

12.10 Deciding on topic

16.11 Finishing at least 1 algorithm

26.11 Finishing a 2nd algorithm

03.12 Finishing a 3rd algorithm

18.12 Improving implementations,
measurements, adding new
features

PLAN DETAILS

16.11 Chan's algorithm*

- Implementing sequential version
- Implementing parallel version
- Implementing variations of the algorithm
- Running implementation on Euler
- Designing benchmarks

26.11 Quickhull

03.12 Secret ;)

*A Minimalist's Implementation of the 3-d Divide-and-Conquer Convex Hull Algorithm - Timothy M. Chan

PLAN DETAILS

16.11 Chan's algorithm*

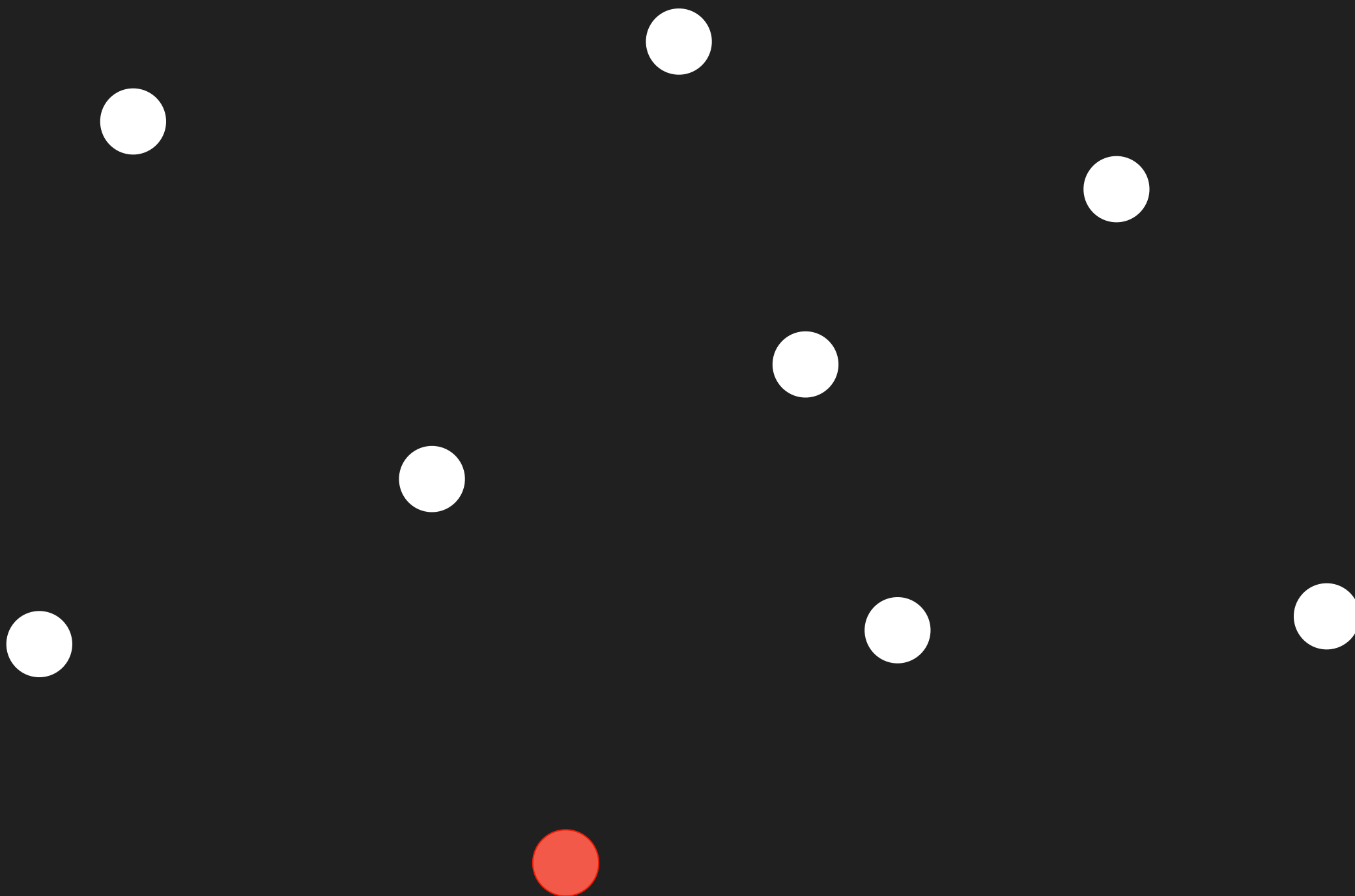
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26.11 Quickhull

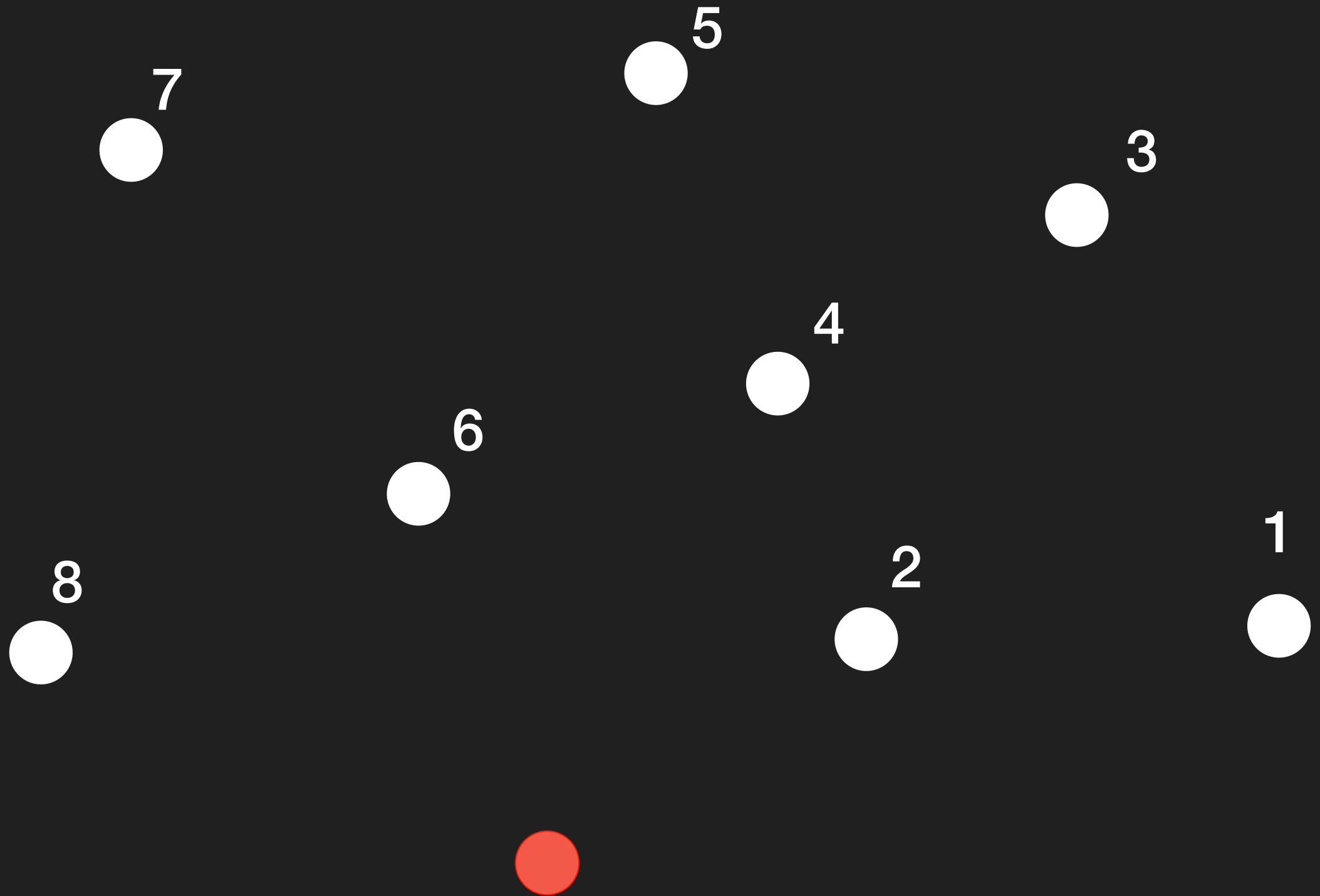
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*A Minimalist's Implementation of the 3-d Divide-and-Conquer Convex Hull Algorithm - Timothy M. Chan

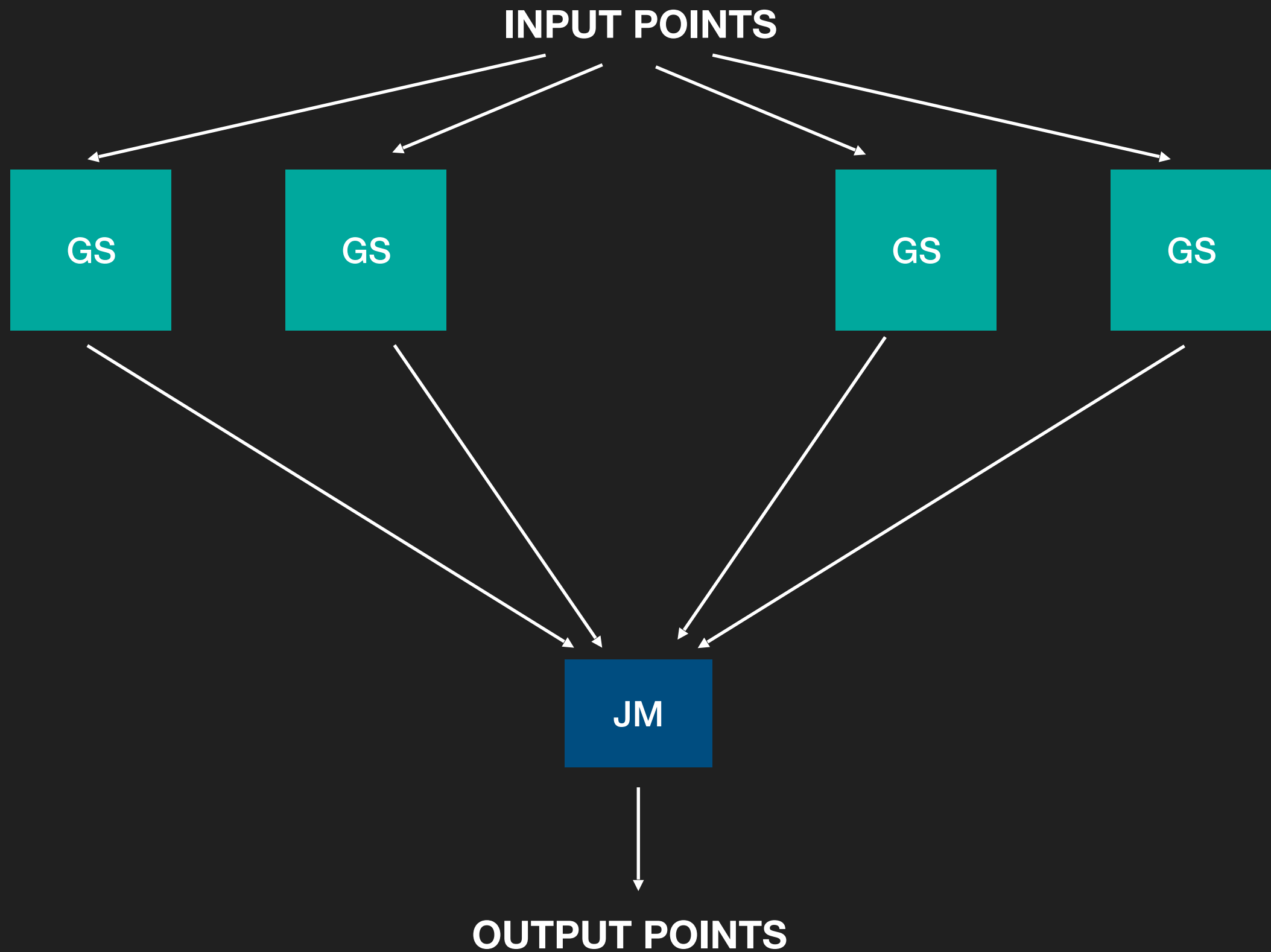
JARVIS MARCH



GRAHAM SCAN



CHAN'S ALGORITHM



DEMO

PLAN DETAILS

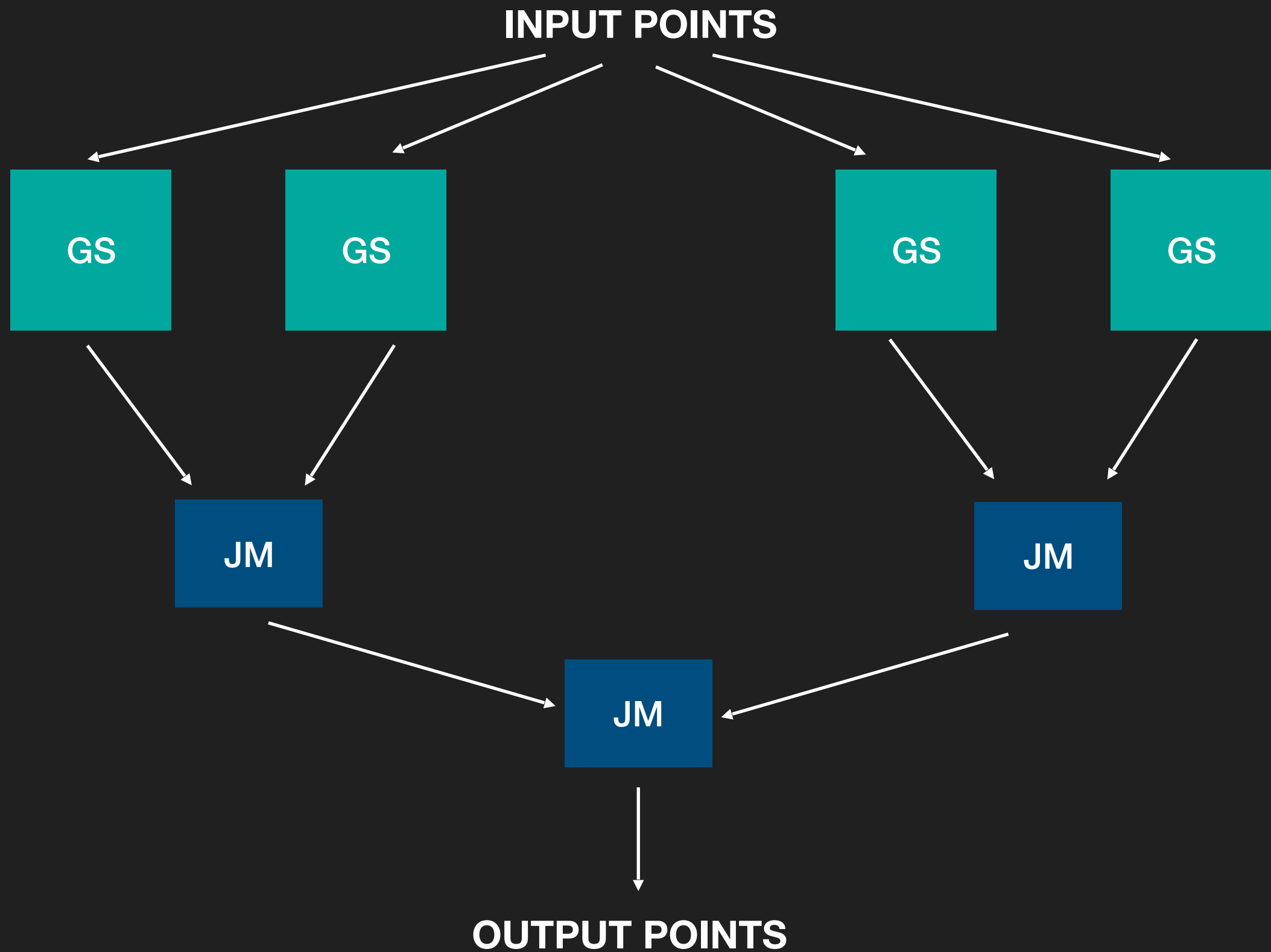
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Variations

CHAN'S ALGORITHM



QUESTIONS