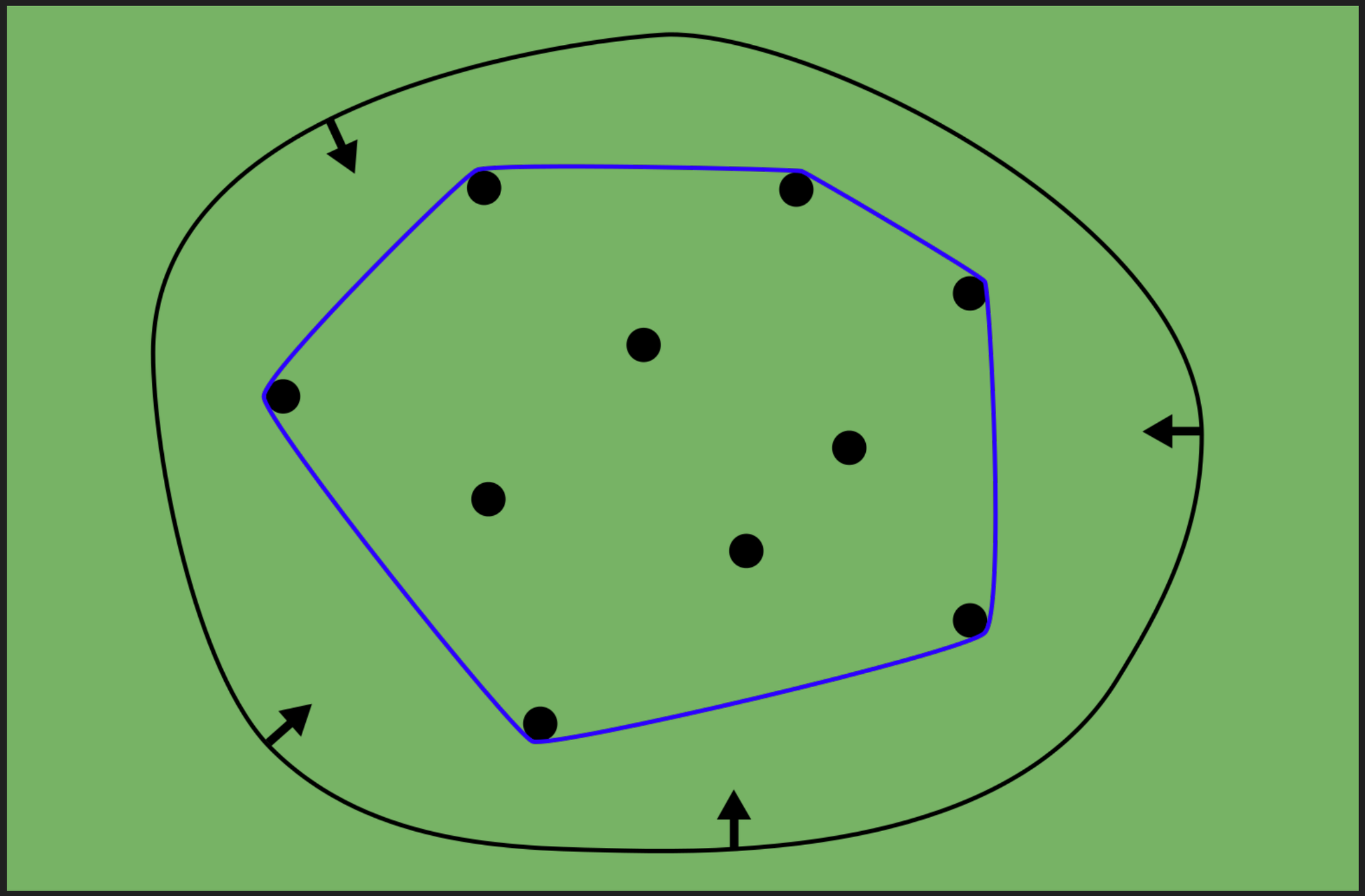
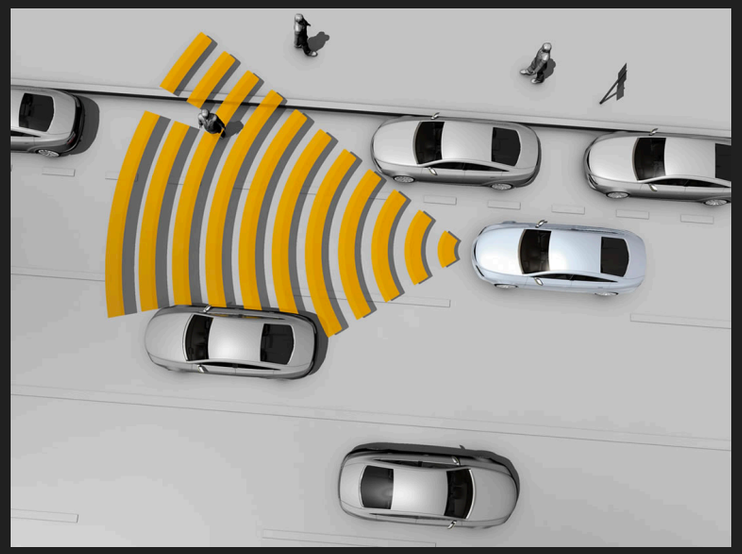
PARALLEL ALGORITHMS FOR FINDING CONVEX HULLS IN 2D

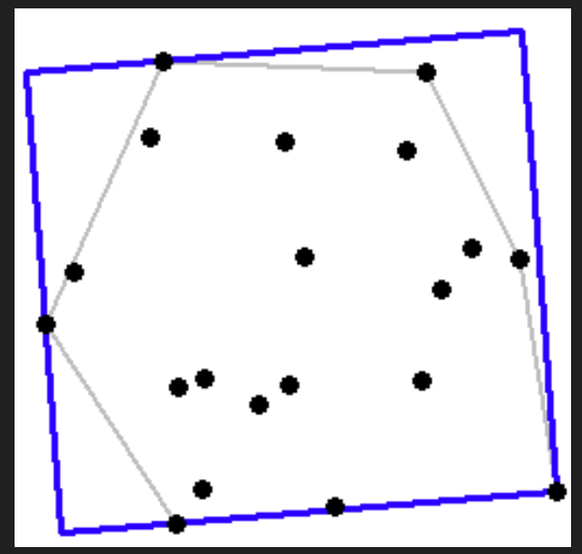
DEFINITION



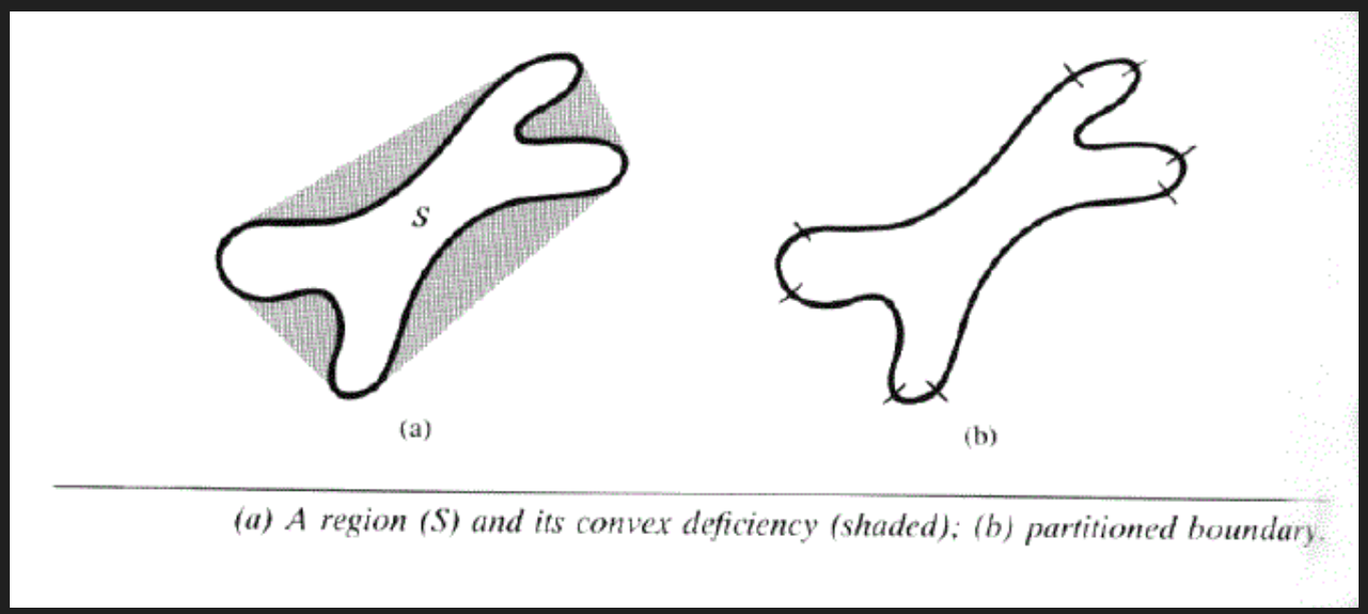
APPLICATIONS



COLLISION AVOIDANCE



SMALLEST BOX



SHAPE ANALYSIS

source: https://brilliant.org/wiki/convex-hull/

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

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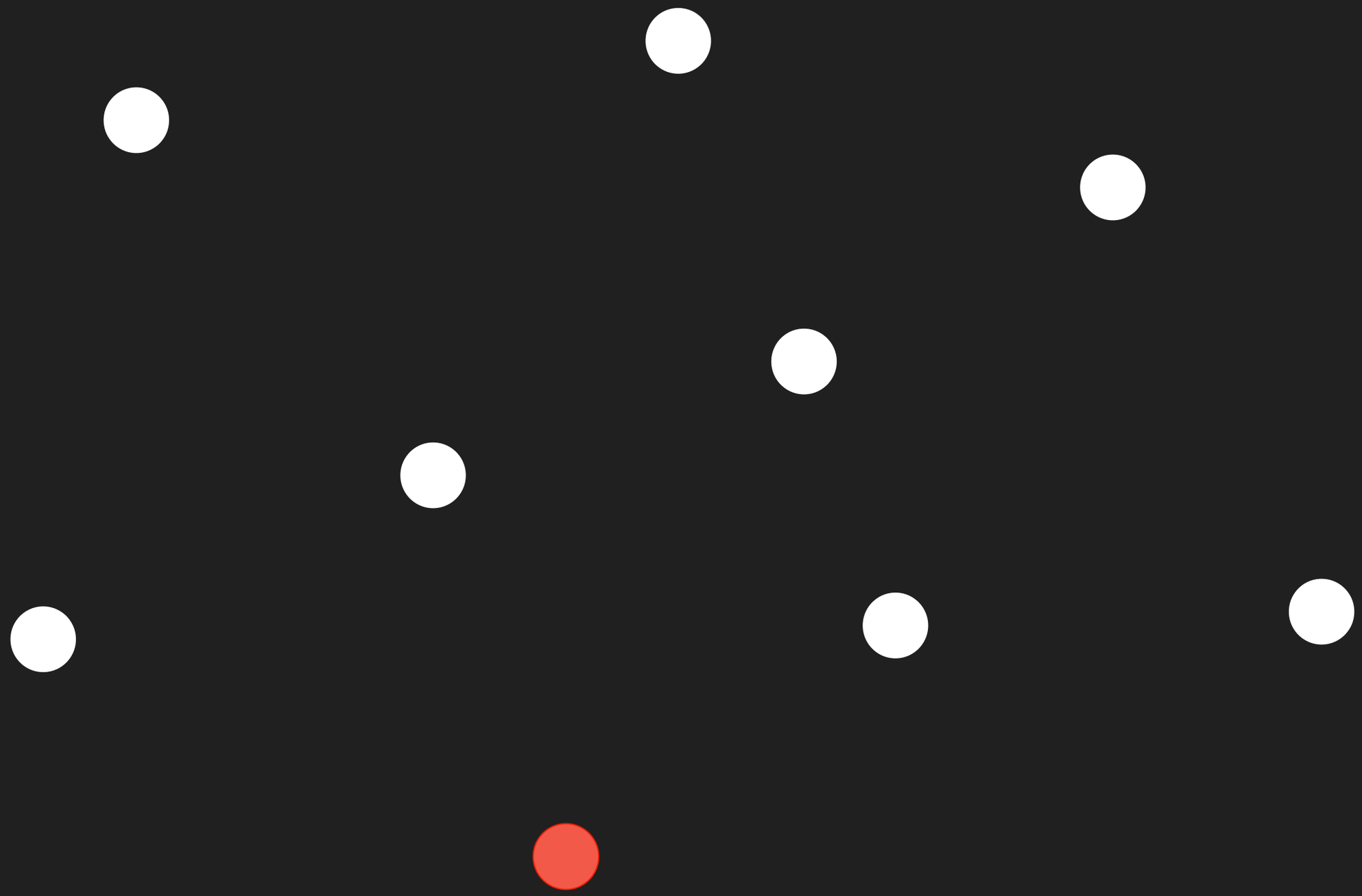
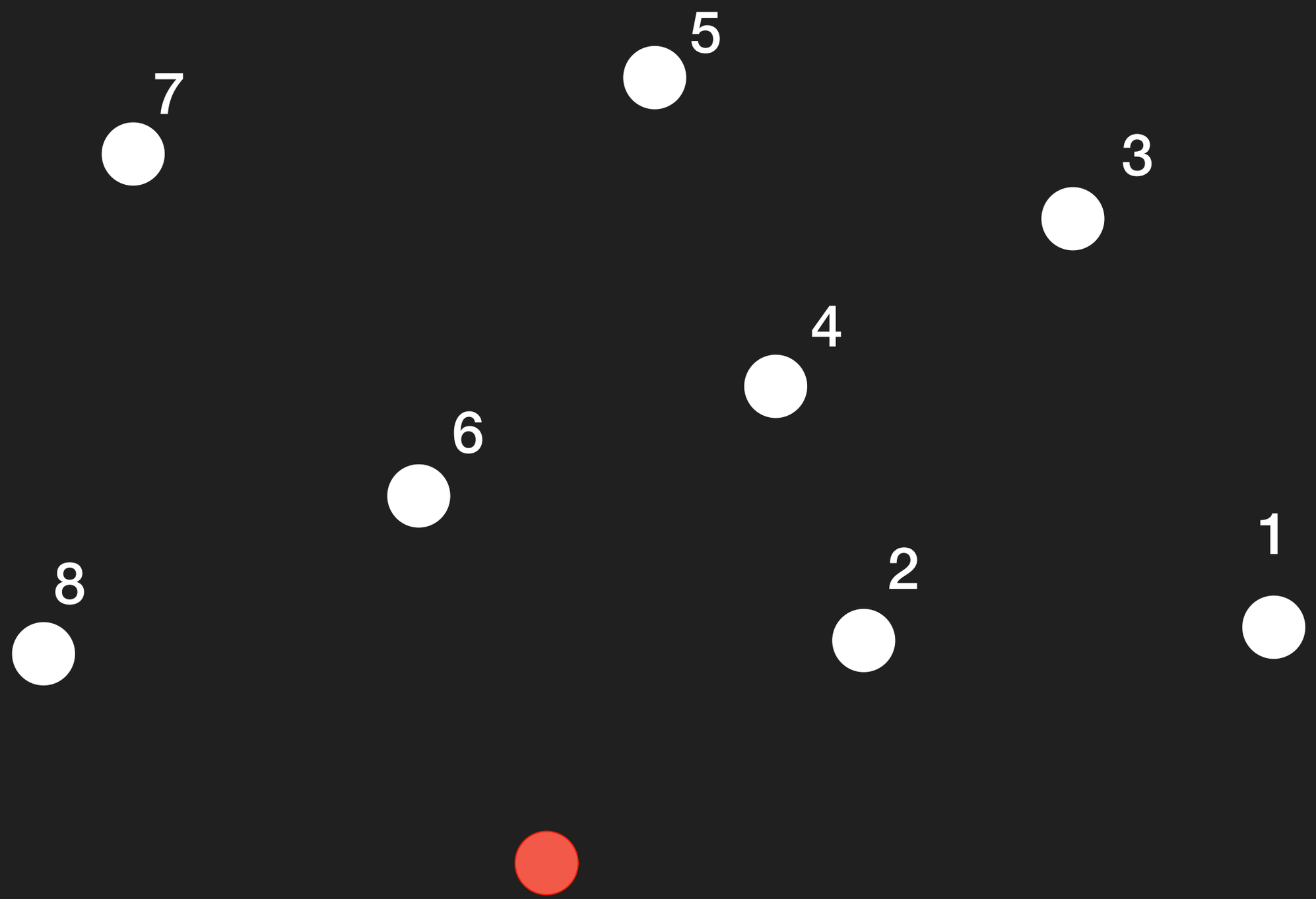
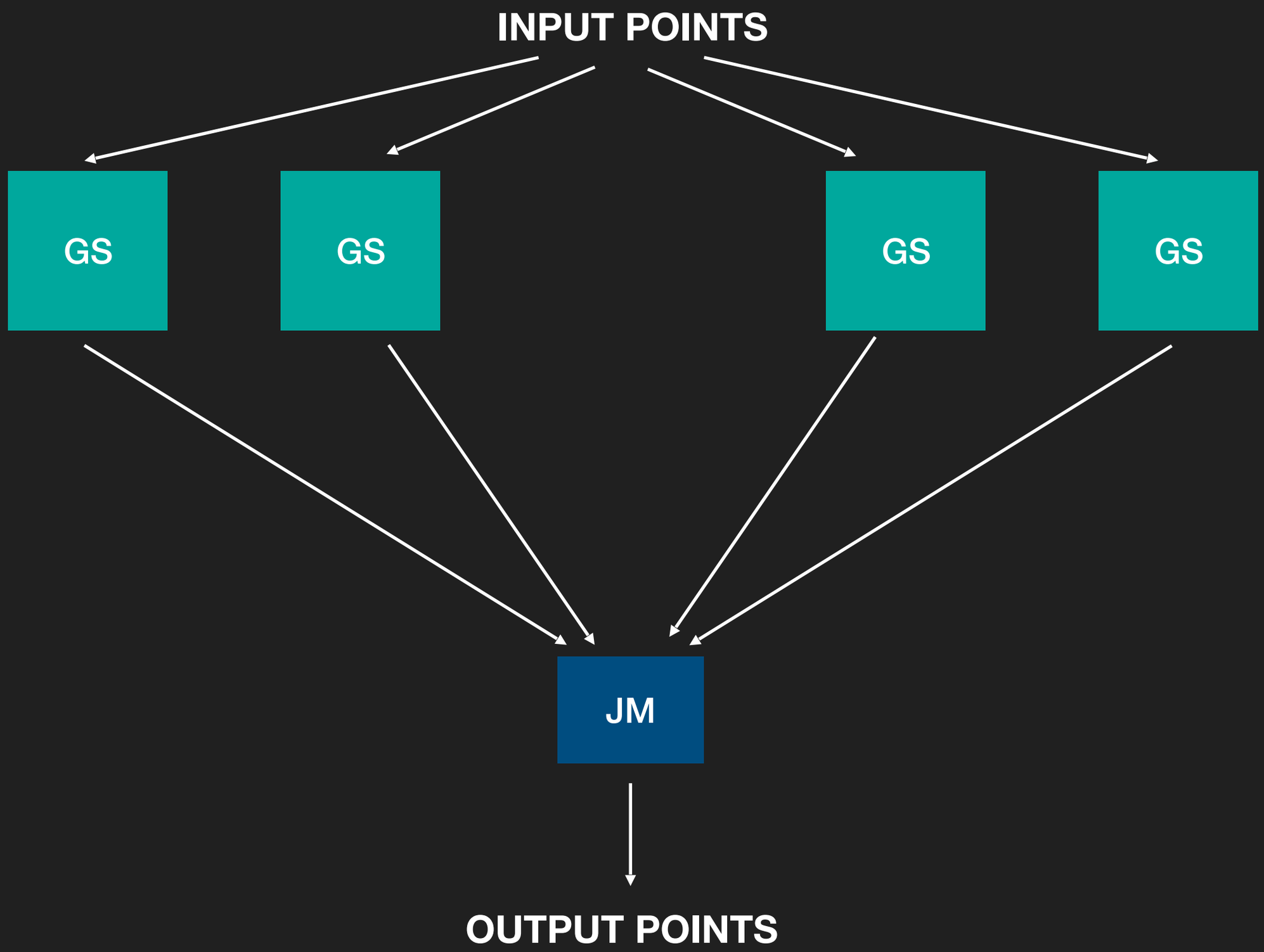
JARVIS MARCH



GRAHAM SCAN



CHAN'S ALGORITHM



DEMO

PLAN DETAILS

16.11 Chan's algorithm

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- Implementing parallel version
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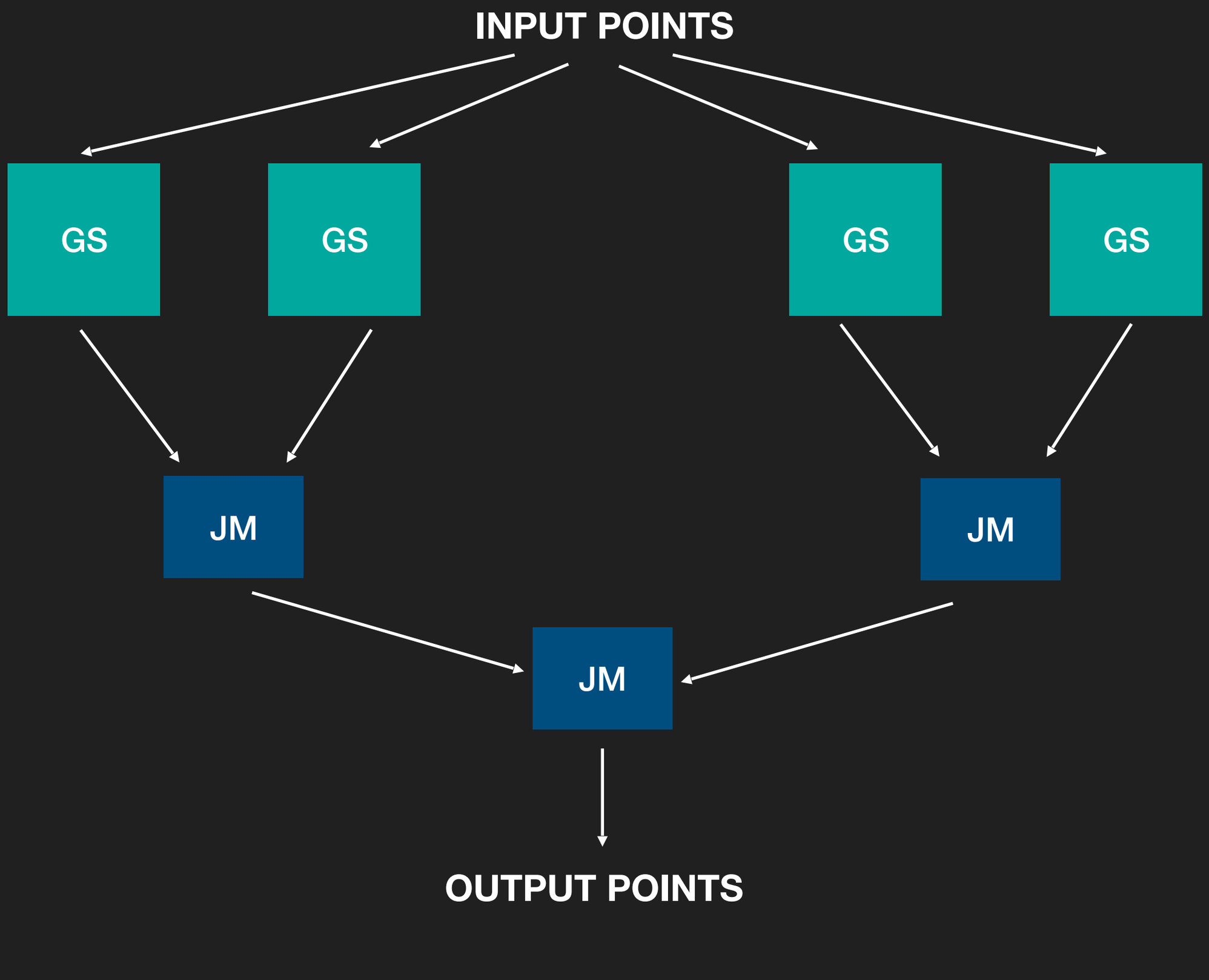
Variations

CHAN'S ALGORITHM



QUESTIONS