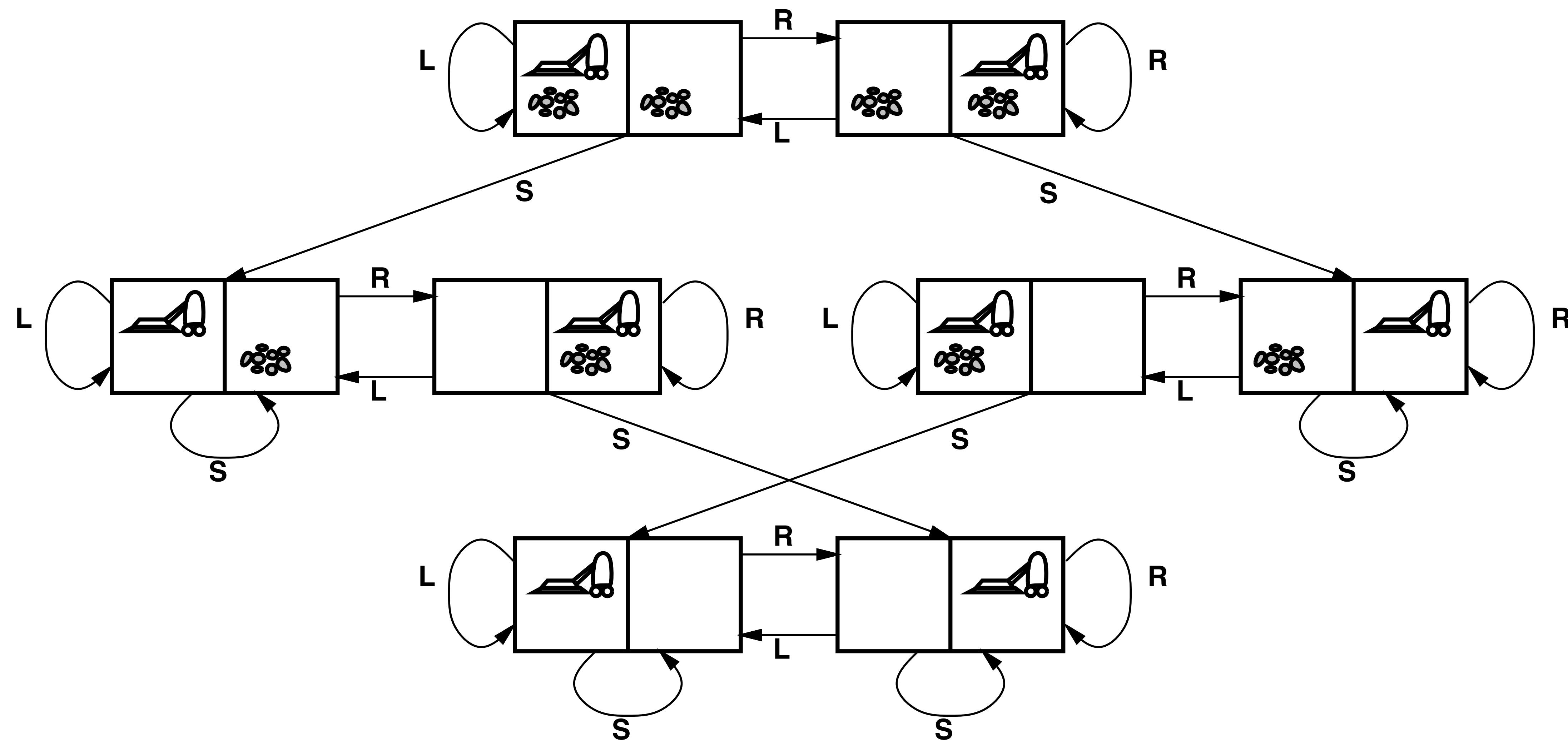
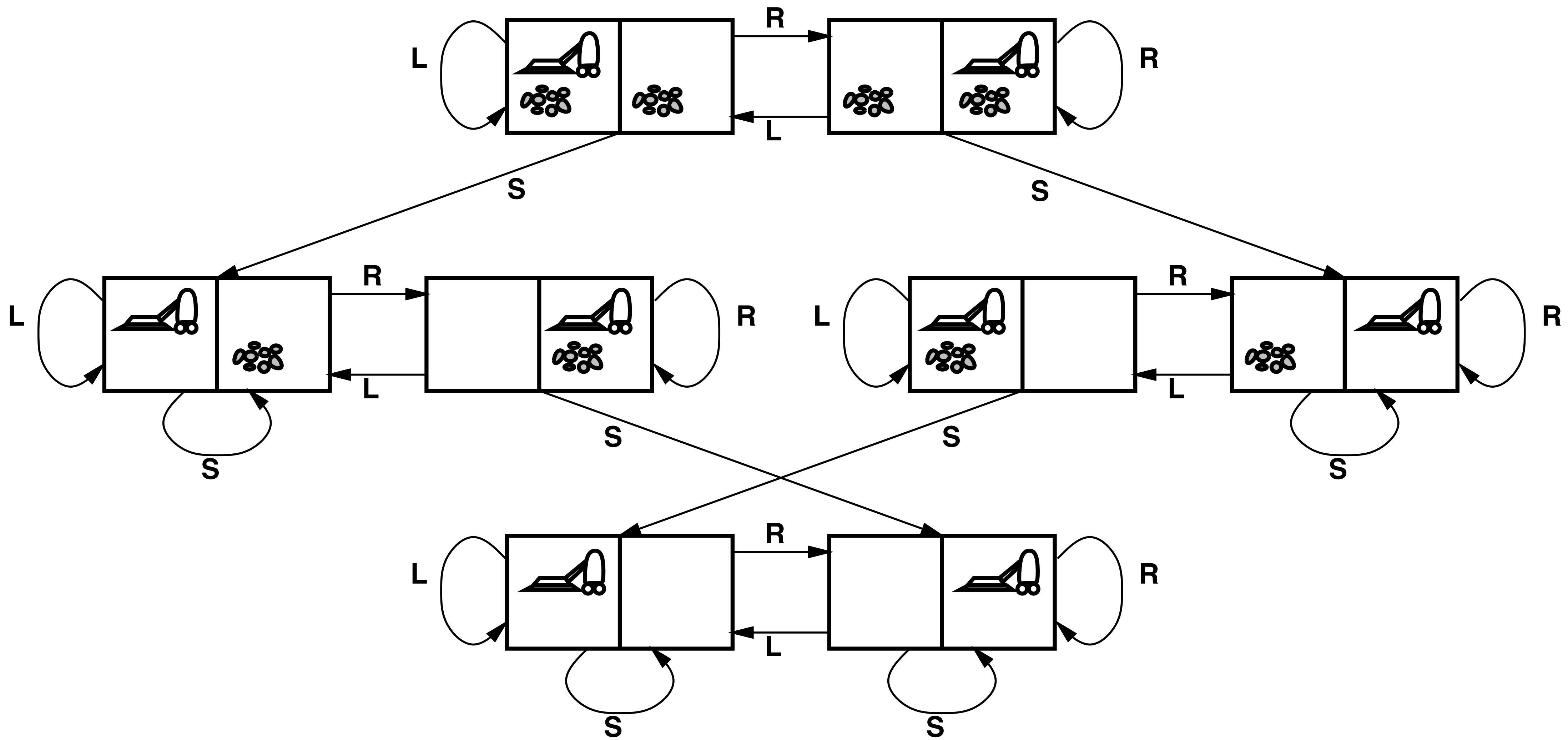


1.2 Introduction to Search

Virginia Tech CS 5804
Introduction to Artificial Intelligence
Bert Huang



Search Algorithms



function TREE-SEARCH(*problem*) **returns** a solution, or failure

initialize the frontier using the initial state of *problem*

loop do:

if the frontier is empty **then return** failure

choose a leaf node and remove it from the frontier

if the node contains a goal state **then return** the solution

expand the chosen node, adding the resulting nodes to frontier

function TREE-SEARCH(*problem*) **returns** a solution, or failure

initialize the frontier using the initial state of *problem*

FIFO: Breadth-first

LIFO: Depth-first

loop do:

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choose a leaf node and remove it from the frontier

if the node contains a goal state **then return** the solution

expand the chosen node, adding the resulting nodes to frontier