

Artificial Intelligence in Java

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Last update: 04/29/2025





About Your Instructor



Software
and System
Engineering



Safety and
Security of
Critical
Systems



Simulation



Artificial
Intelligence

Demonstrate how to combine AI theory with Java programming language

What You Will Learn

Importance of Artificial Intelligence

Why it's important to study **Artificial Intelligence**

Balanced Approach

A balance of **theory and practice** throughout the course

Java Implementations

Core AI topics using Java implementations



Graph Algorithms and Pathfinding

Breadth-First Search



Depth-First Search



Iterative Deepening Depth-First Search

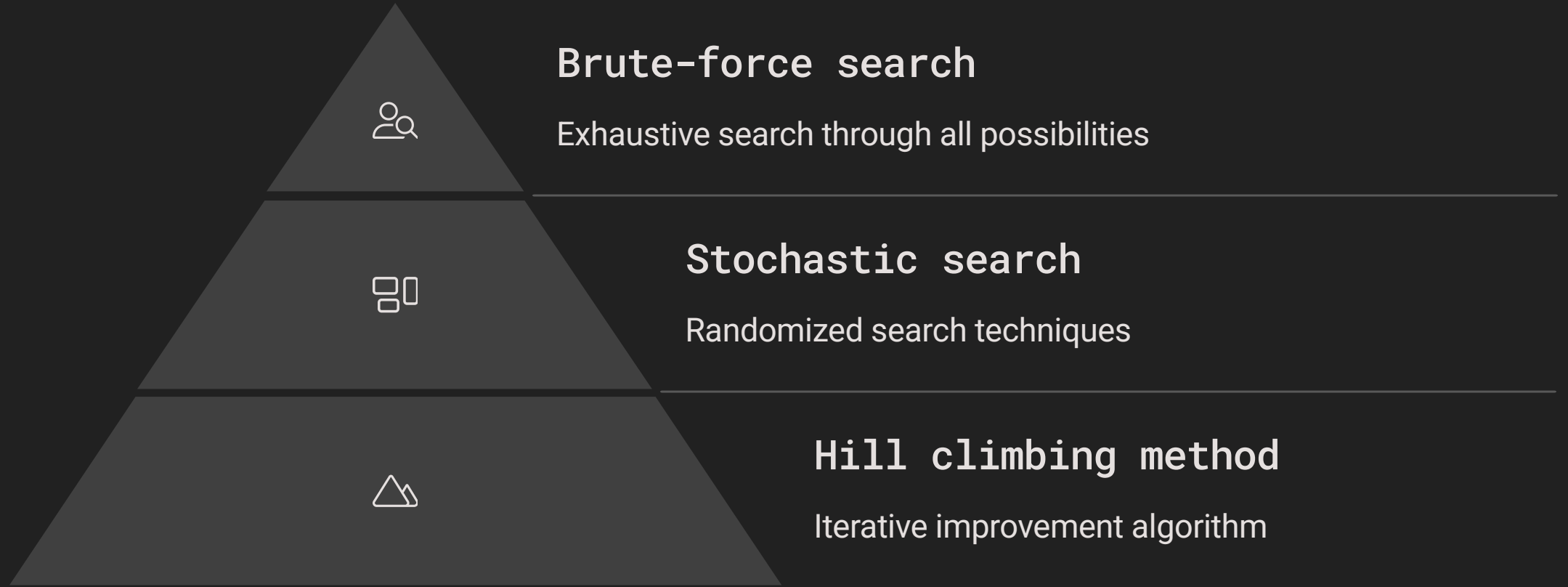


A* Search



Understand their use in AI problems like **navigation** and **games**

Optimization Algorithms



Apply them to solve complex search problems

Heuristics and Metaheuristics

Tabu Search

Memory-based search strategy

Particle Swarm Optimization

Population-based stochastic optimization technique



Simulated Annealing

Probabilistic technique for approximating global optimum

Genetic Algorithms

Evolutionary approach to optimization

Techniques to tackle hard optimization problems

Game AI – Minimax Algorithm

Two-Player Games

Focus on two-player games like **Tic-Tac-Toe** and **Chess**



AI Agent Building

Learn how to build AI agents using:

- **Minimax algorithm**
- **Game engines**

Understand how **strategic reasoning** works in AI



Let's Get Started!

Join the Course

Thanks for joining the course!

Step-by-Step Learning

We'll explore each topic **step by step**

Dive Into AI

Let's dive into the world of **Artificial Intelligence** in **Java**