

Bachelor Projects in Evolutionary Algorithms

Section for Algorithms, Logic and Graphs

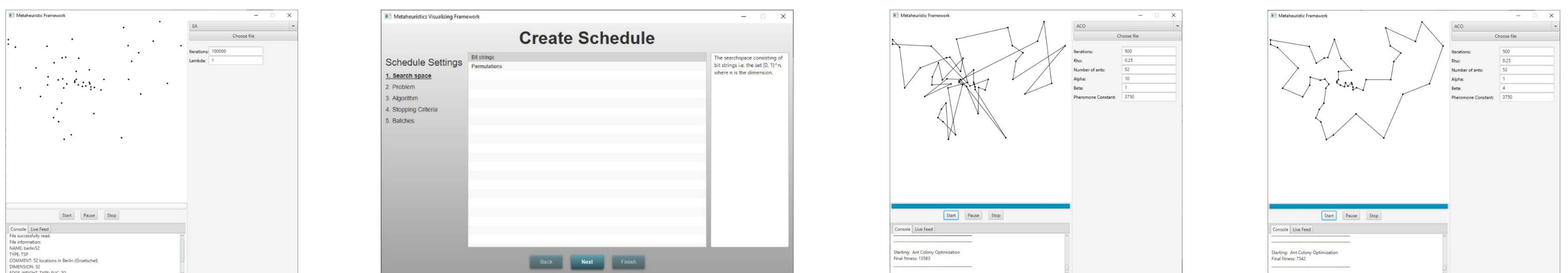
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Frameworks for Evolutionary Algorithms and Heuristic Optimization

- Evolutionary Algorithms (EA) can solve hard optimization problems and general black-box optimization problems using bio-inspired search operators



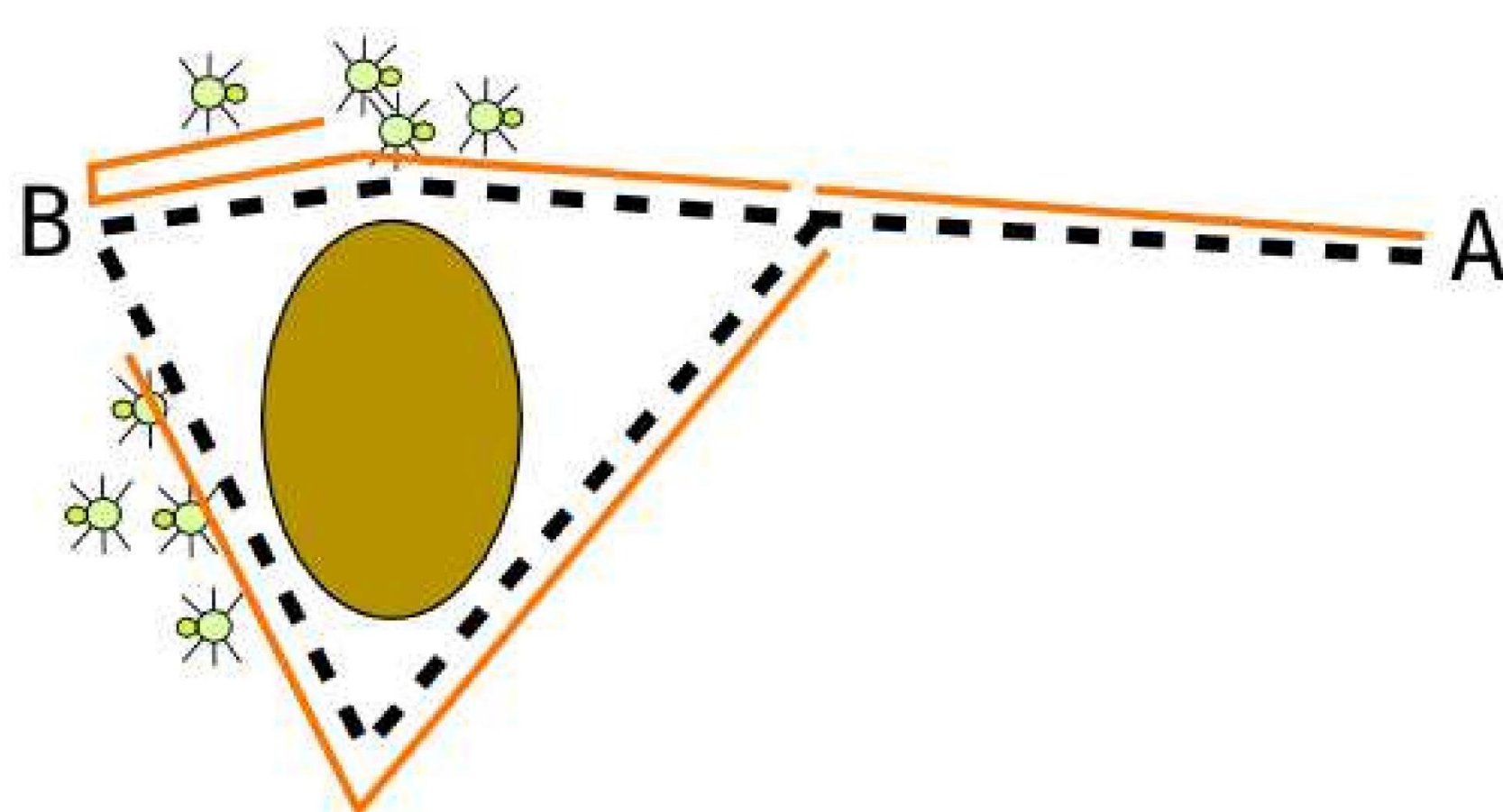
- Implement, visualize and compare EAs on benchmark problems on bit strings and permutation problems (e.g. TSP, vehicle routing)



- Develop an extensible framework for the implementation of and experimentation with different metaheuristics



- Add further heuristics such as Ant Colony Optimization and Simulated Annealing



- Extract statistical properties such as average running time, best-so-far fitness, ...

- Required background: basic knowledge in algorithms (preferably also in metaheuristics, e.g., from course 02249), GUI prog., and software engineering

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