

AmstelHaege

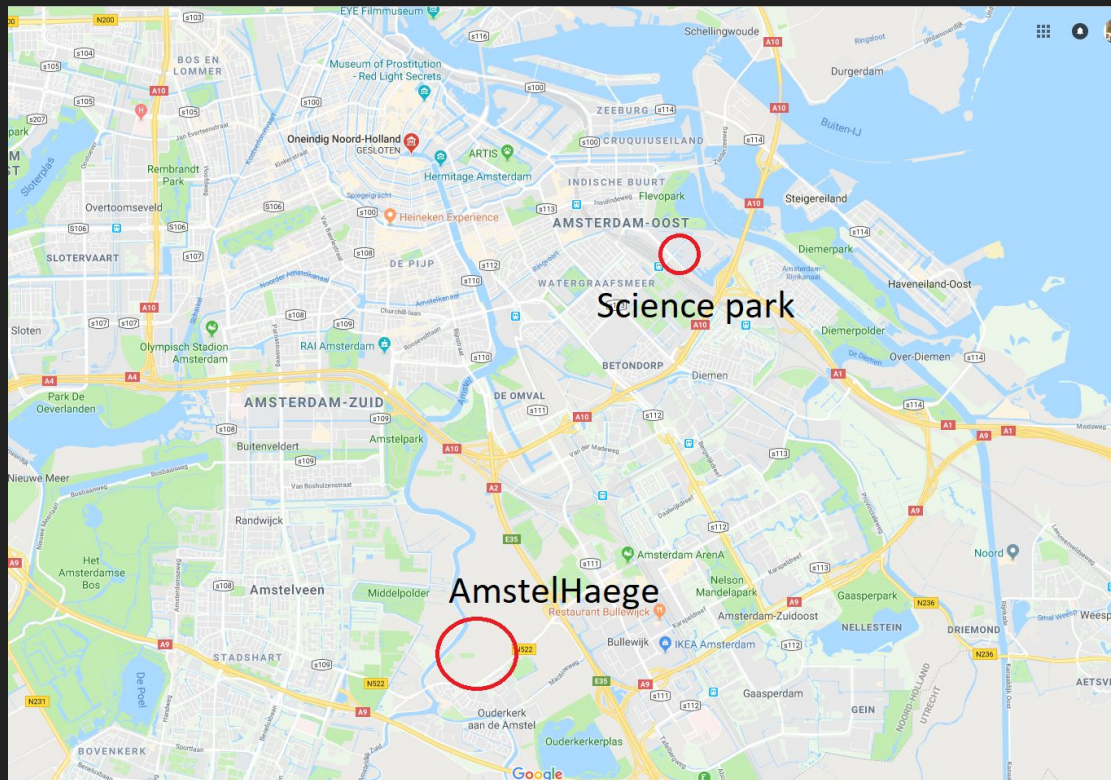
Khalid El Khuri - **O**rin Habich - **X**ander Locsin

KOX - Werkgroep C



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Opdracht

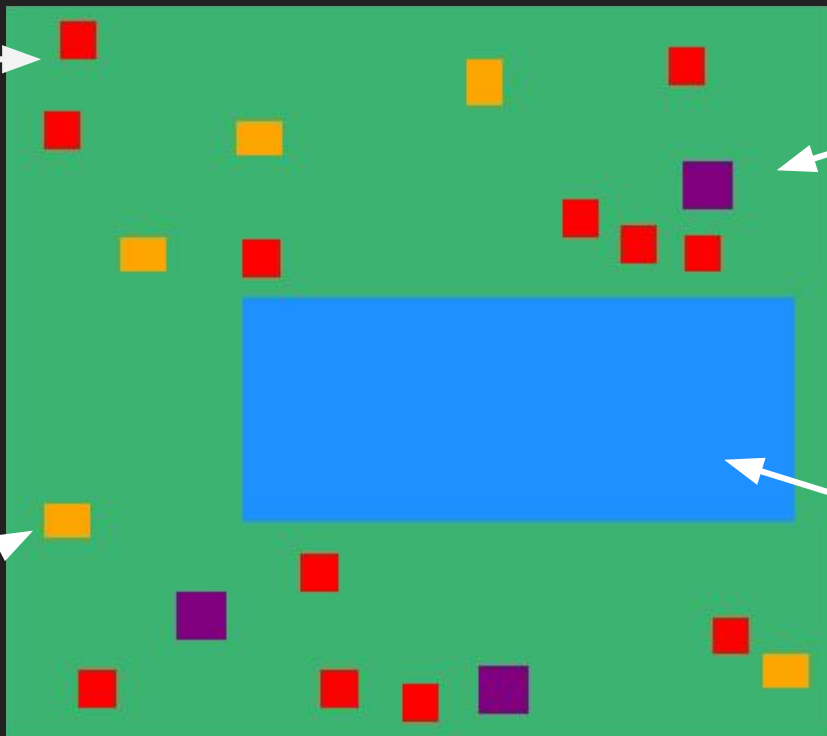
- Gebied is 160m x 180m
- 20, 40, 60 huizen variant
- 60% eengezinswoningen, 25% bungalows en 15% maisons
- 20% van het gebied water, max 4 stuks, geen lange dunne slootjes
- Hoogste score

Eengezinswoning



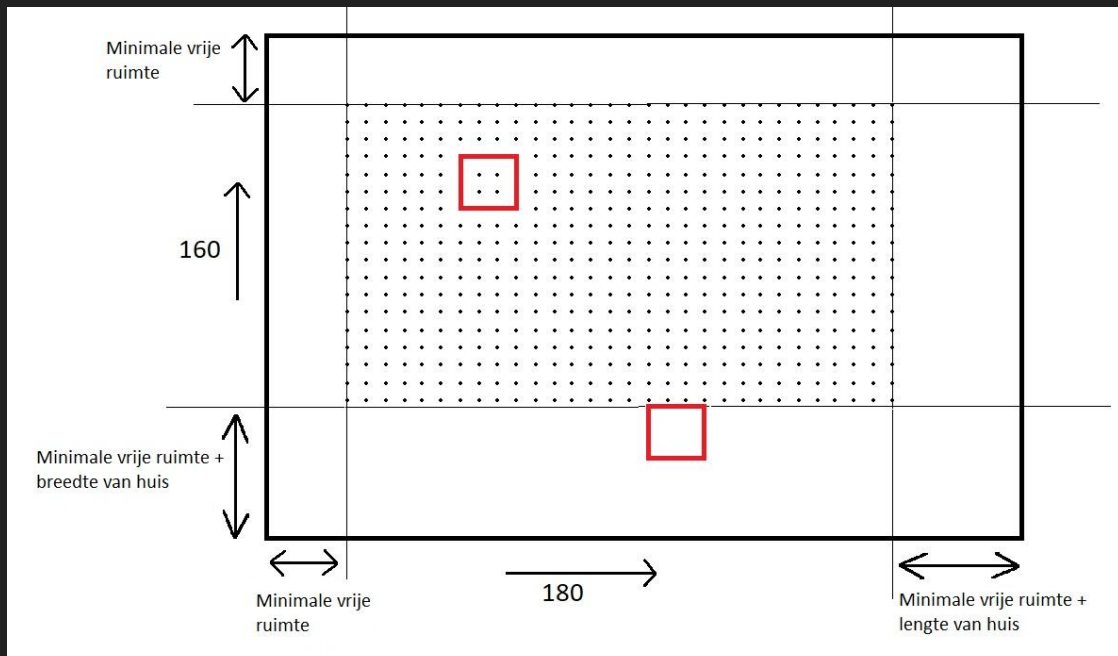
Maison

Bungalow



Water

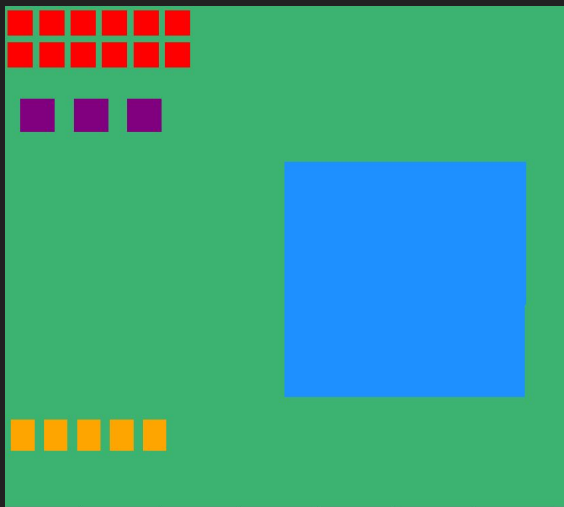
De toestandsruimte



De geschatte bovengrens van de toestandsruimte:
 $4,55 \times 10^{87}$

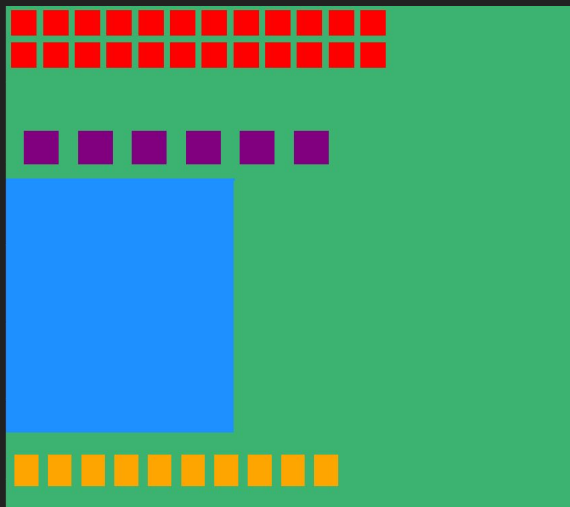
Minimale scores

€ 7 245 000



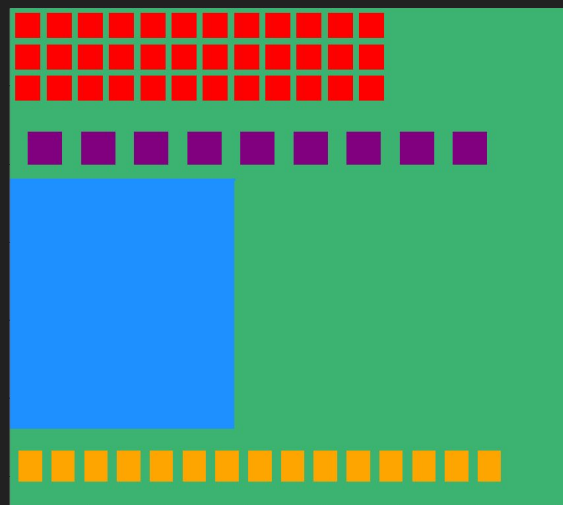
20 huizen

€ 14 490 000



40 huizen

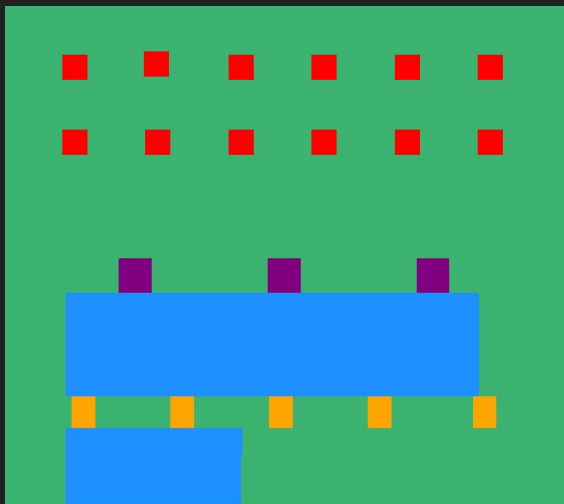
€ 21 735 000



60 huizen

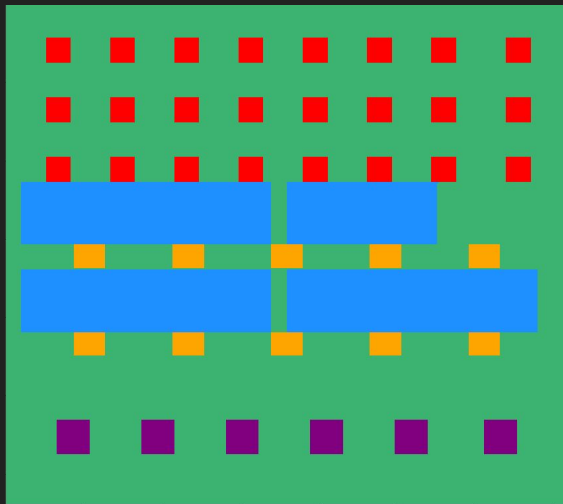
Zelfgekozen verdelingen

€ 13 289 880



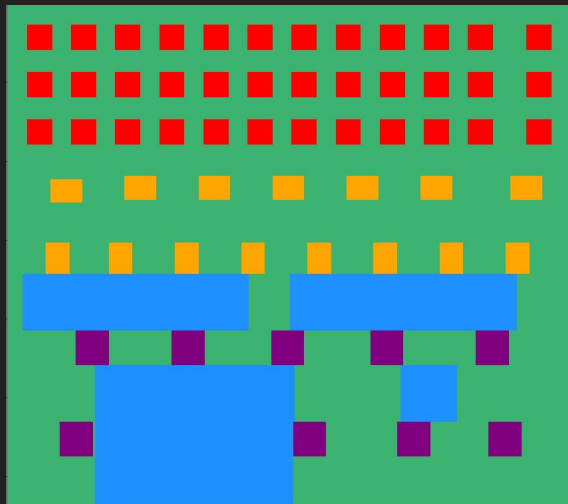
20 huizen

€ 21 246 000



40 huizen

€ 28 678 770



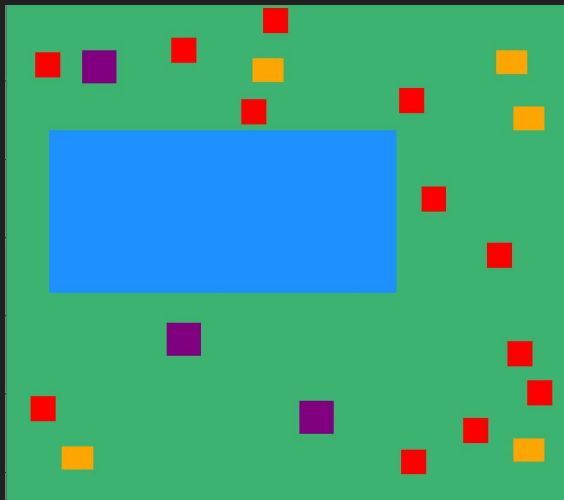
60 huizen

Algoritmes

- Random
- Hillclimber
- Simulated Annealing
- Potential Field Hillclimber

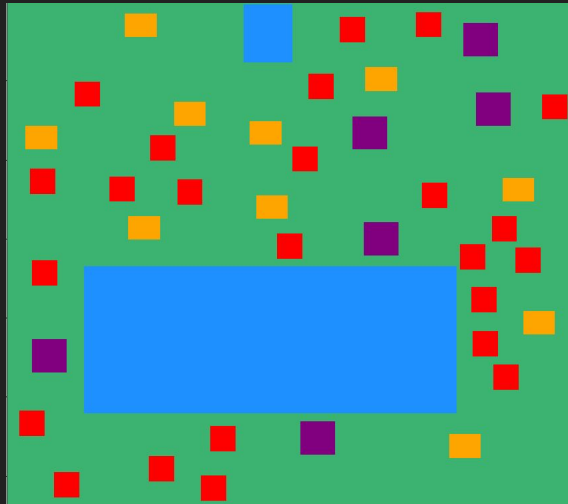
Random

€ 10 150 470



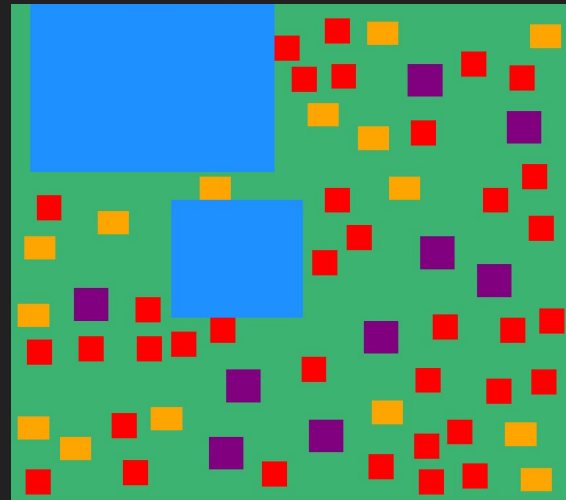
20 huizen

€ 16 214 610



40 huizen

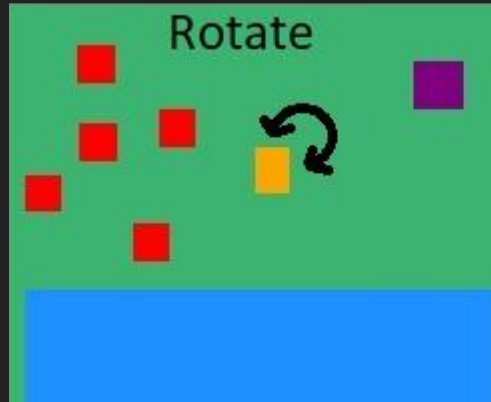
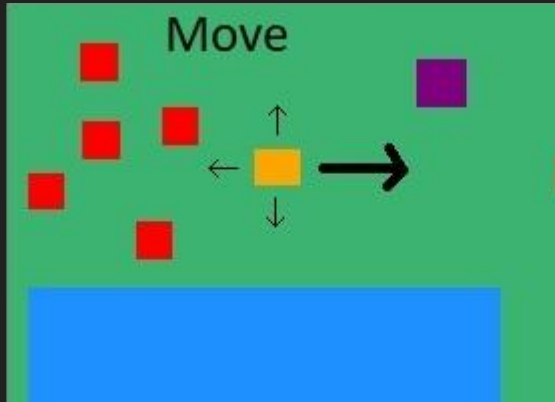
€ 23 411 640



60 huizen

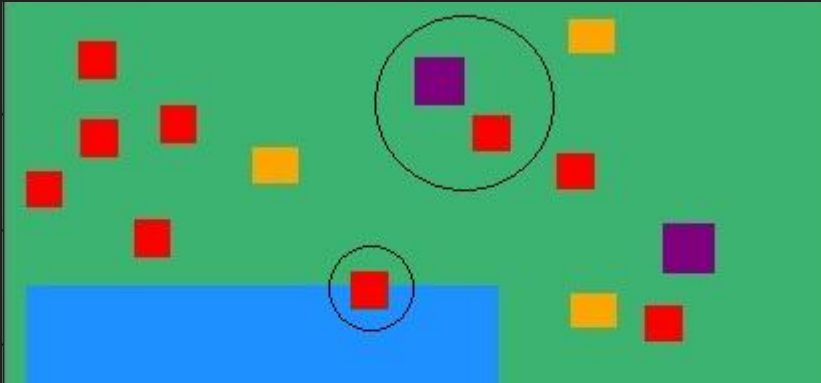
Hillclimber

- Kiest random een huis of water
- Kiest random een actie

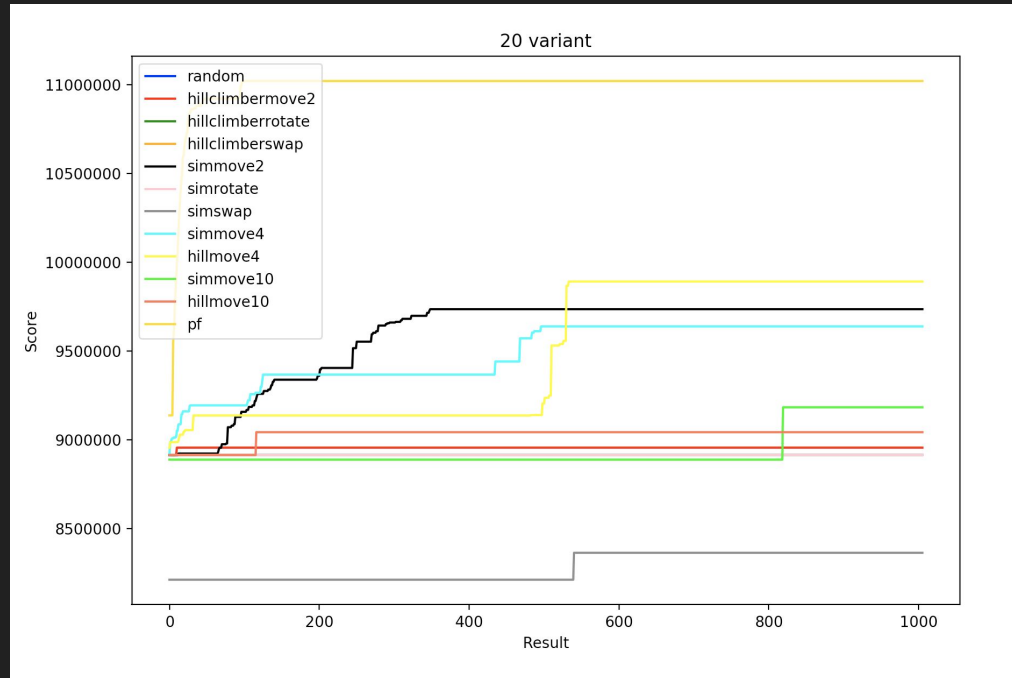


Simulated Annealing

- Grotendeels hetzelfde als Hillclimber, maar accepteert soms verslechtingen
- Als de positie van een huis invalide wordt dan wordt de waarde van dat huis € 0



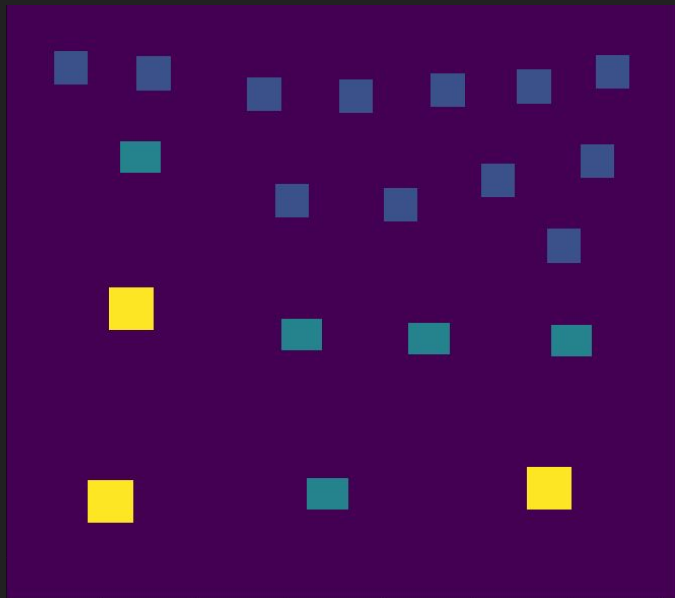
Resultaten



Potential Field Hillclimber



Potential Field Hillclimber



Conclusie

Future works