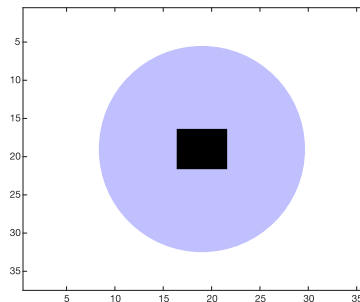


Important coefficient: This coefficient controls how big the potential field is around the obstacles

→  $16 * \text{distance\_transform\_edt}(255 - \text{world\_obstacles})$

362.039 350.907 340.165 329.848 320. 310.664 301.087 293.721 286.217 279.428 273.408 268.209 263.079 260.461 257.992 256.5 256. 256. 256. 256. 256.5 257.992 260.461 263.079 268.209 273.408 279.428 286.217 293.721 301.087 310.664 320. 329.848 340.165 350.907 362.039  
350.907 339.411 328.293 317.591 307.35 297.617 288.444 279.886 272. 264.847 258.488 252.982 248.387 244.753 242.124 240.533 240. 240. 240. 240. 240.5 242.124 244.753 248.387 252.982 258.488 264.847 272. 279.886 288.444 297.617 307.35 317.591 328.293 339.411 350.907  
340.165 328.293 316.784 305.68 295.025 284.872 275.274 266.293 257.992 250.44 243.795 237.857 232.964 229.085 226.274 224.571 224. 224. 224. 224. 224.5 226.274 229.085 232.964 237.857 243.795 250.44 257.992 266.293 275.274 284.872 295.025 305.68 316.784 328.293 340.165  
329.848 317.591 305.68 294.156 283.069 272.47 262.42 252.982 244.229 236.237 229.085 222.854 217.624 213.467 208.614 208. 208. 208. 208. 208. 208.6 210.447 213.467 217.624 222.854 229.085 236.237 244.229 252.982 262.42 272.47 283.069 294.156 305.68 317.591 329.848  
320. 307.35 295.025 283.069 271.529 260.461 249.028 240. 238.755 222.279 214.663 208. 202.386 197.909 194.648 192.666 192. 192. 192. 192. 192. 192.6 194.648 197.909 202.386 208. 214.663 222.279 238.755 240. 249.028 260.461 271.529 283.069 295.025 307.35 320.  
310.664 297.617 284.872 272.47 260.461 249.902 237.857 227.403 217.624 208.614 200.479 193.329 187.275 182.428 178.885 176.726 176. 176. 176. 176. 176. 176.7 178.885 182.428 187.275 193.329 200.479 208.614 217.624 227.403 237.857 249.902 260.461 272.47 284.872 297.617 310.664  
301.087 288.444 275.274 262.42 249.928 237.857 226.274 215.258 204.9 195.305 186.59 178.885 172.325 167.045 163.169 160.798 160. 160. 160. 160. 160. 160.7 163.169 167.045 172.325 178.885 186.59 195.305 204.9 215.258 226.274 237.857 249.928 262.42 275.274 288.444 301.087  
293.721 279.886 266.293 252.982 240. 227.483 215.258 203.647 192.666 182.428 173.066 164.73 157.582 151.789 147.513 144.886 144. 144. 144. 144. 144. 144.8 147.513 151.789 157.582 164.73 173.066 182.428 192.666 203.647 215.258 227.483 240. 252.982 266.293 279.886 293.721  
286.217 272. 257.992 244.229 238.755 217.624 204.9 192.666 181.019 170.882 160. 150.944 143.108 136.784 131.939 128.996 128. 128. 128. 128. 128. 128.6 131.939 136.784 143.108 150.944 160. 170.882 181.019 192.666 204.9 217.624 238.755 244.229 257.992 272. 286.217  
279.428 264.847 250.44 236.237 222.279 208.614 195.305 182.428 170.882 158.392 147.513 137.637 128.996 121.852 116.482 113.137 112. 112. 112. 112. 112. 112.6 121.852 128.996 137.637 147.513 158.392 170.882 182.428 195.305 208.614 222.279 236.237 250.44 264.847 279.428  
273.408 258.488 243.705 229.085 214.663 200.479 186.59 173.066 160. 147.513 135.765 124.964 115.378 107.331 101.193 97.324 96. 96. 96. 96. 96. 96.6 101.193 107.331 115.378 124.964 135.765 147.513 160. 173.066 186.59 200.479 214.663 229.085 243.705 258.488 273.408  
268.209 252.982 237.857 222.854 208. 193.329 178.885 164.73 150.944 137.637 124.964 113.137 102.45 93.295 86.163 81.584 80. 80. 80. 80. 80. 80.6 81.584 86.163 93.295 102.45 113.137 124.964 137.637 150.944 164.73 178.885 193.329 208. 222.854 237.857 252.982 268.209  
263.079 248.387 232.964 217.624 202.386 187.275 172.325 157.582 143.108 128.996 115.378 102.45 90.51 80. 71.554 65.97 64. 64. 64. 64. 64. 64.6 65.97 71.554 80. 90.51 102.45 115.378 128.996 143.108 157.582 172.325 187.275 202.386 217.624 232.964 248.387 263.079  
258.461 244.753 229.085 213.467 197.909 182.428 167.045 151.789 136.784 121.852 107.331 93.295 80. 67.882 57.689 50.596 48. 48. 48. 48. 48. 48.6 50.596 57.689 67.882 80. 93.295 107.331 121.852 136.784 151.789 167.045 182.428 197.909 213.467 229.085 244.753 258.461  
257.992 242.124 226.274 210.447 194.648 178.885 163.169 147.513 131.939 116.482 101.193 86.163 71.554 57.689 45.255 35.777 32. 32. 32. 32. 32. 32.6 35.777 45.255 57.689 71.554 86.163 101.193 116.482 131.939 147.513 163.169 178.885 194.648 210.447 226.274 242.124 257.992  
256.5 240.533 224.571 208.614 192.666 176.726 160.798 144.886 128.996 113.137 97.324 81.584 65.97 50.596 35.777 22.627 16. 16. 16. 16. 16. 16.6 22.627 35.777 50.596 65.97 81.584 97.324 113.137 128.996 144.886 160.798 176.726 192.666 208.614 224.571 240.533 256.5  
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256.5 240.533 224.571 208.614 192.666 176.726 160.798 144.886 128.996 113.137 97.324 81.584 65.97 50.596 35.777 22.627 16. 16. 16. 16. 16. 16.6 22.627 35.777 50.596 65.97 81.584 97.324 113.137 128.996 144.886 160.798 176.726 192.666 208.614 224.571 240.533 256.5  
257.992 242.124 226.274 210.447 194.648 178.885 163.169 147.513 131.939 116.482 101.193 86.163 71.554 57.689 45.255 35.777 32. 32. 32. 32. 32. 32.6 35.777 45.255 57.689 71.554 86.163 101.193 116.482 131.939 147.513 163.169 178.885 194.648 210.447 226.274 242.124 257.992  
260.461 244.753 229.085 213.467 197.909 182.428 167.045 151.789 136.784 121.852 107.331 93.295 80. 67.882 57.689 50.596 48. 48. 48. 48. 48. 48.6 50.596 57.689 67.882 80. 93.295 107.331 121.852 136.784 151.789 167.045 182.428 197.909 213.467 229.085 244.753 260.461  
263.079 248.387 232.964 217.624 202.386 187.275 172.325 157.582 143.108 128.996 115.378 102.45 90.51 80. 71.554 65.97 64. 64. 64. 64. 64. 64.6 65.97 71.554 80. 90.51 102.45 115.378 128.996 143.108 157.582 172.325 187.275 202.386 217.624 232.964 248.387 263.079  
268.209 252.982 237.857 222.854 208. 193.329 178.885 164.73 150.944 137.637 124.964 113.137 102.45 93.295 86.163 81.584 80. 80. 80. 80. 80. 80.6 81.584 86.163 93.295 102.45 113.137 124.964 137.637 150.944 164.73 178.885 193.329 208. 222.854 237.857 252.982 268.209  
273.408 258.488 243.705 229.085 214.663 200.479 186.59 173.066 160. 147.513 135.765 124.964 115.378 107.331 101.193 97.324 96. 96. 96. 96. 96. 96.6 97.324 101.193 107.331 115.378 124.964 135.765 147.513 160. 173.066 186.59 200.479 214.663 229.085 243.705 258.488 273.408  
279.428 264.847 250.44 236.237 222.279 208.614 195.305 182.428 170.882 158.392 147.513 137.637 128.996 121.852 116.482 113.137 112. 112. 112. 112. 112. 112.6 116.482 121.852 128.996 137.637 147.513 158.392 170.882 182.428 195.305 208.614 222.279 236.237 250.44 264.847 279.428  
286.217 272. 257.992 244.229 238.755 217.624 204.9 192.666 181.019 170.882 160. 150.944 143.108 136.784 131.939 128.996 128. 128. 128. 128. 128. 128.6 131.939 136.784 143.108 150.944 160. 170.882 181.019 192.666 204.9 217.624 238.755 244.229 257.992 272. 286.217  
301.087 288.444 275.274 262.42 249.928 237.857 226.274 215.258 204.9 195.305 186.59 178.885 172.325 167.045 163.169 160.798 160. 160. 160. 160. 160. 160.6 163.169 167.045 172.325 178.885 186.59 195.305 204.9 215.258 226.274 237.857 249.928 262.42 275.274 288.444 301.087  
310.664 297.617 284.872 272.47 260.461 249.902 237.857 227.403 217.624 208.614 200.479 193.329 187.275 182.428 178.885 176.726 176. 176. 176. 176. 176. 176.6 178.885 182.428 187.275 193.329 200.479 208.614 217.624 227.403 237.857 249.902 260.461 272.47 284.872 297.617 310.664  
329.848 317.591 305.68 294.156 283.069 272.47 262.42 252.982 244.229 236.237 229.085 222.854 217.624 213.467 208.614 208. 208. 208. 208. 208. 208.6 208.614 210.447 213.467 217.624 222.854 229.085 236.237 244.229 252.982 262.42 272.47 283.069 294.156 305.68 317.591 329.848  
340.165 328.293 316.784 305.68 295.025 284.872 275.274 266.293 257.992 250.44 243.795 237.857 232.964 229.085 226.274 224.571 224. 224. 224. 224. 224. 224.6 226.274 229.085 232.964 237.857 243.795 250.44 257.992 266.293 275.274 284.872 295.025 305.68 316.784 328.293 340.165  
350.907 339.411 328.293 317.591 307.35 297.617 288.444 279.886 272. 264.847 258.488 252.982 248.387 244.753 242.124 240.533 240. 240. 240. 240. 240. 240.6 240.533 242.124 244.753 248.387 252.982 258.488 264.847 272. 279.886 288.444 297.617 307.35 317.591 328.293 339.411 350.907  
362.039 350.907 340.165 329.848 320. 310.664 301.087 293.721 286.217 279.428 273.408 268.209 263.079 260.461 257.992 256.5 256. 256. 256. 256. 256.5 257.992 260.461 263.079 268.209 273.408 279.428 286.217 293.721 301.087 310.664 320. 329.848 340.165 350.907 362.039



coefficient  $\uparrow$   $\longrightarrow$  potential field expansion  $\downarrow$  (it shrinks)  
(potential field closer to the obstacles)

coefficient  $\downarrow$   $\longrightarrow$  potential field expansion  $\uparrow$  (it expands)  
(potential field further away from to the obstacles)

