RRT* Algorithm

Input: Map, Start_point, Target_point

Result: A path from Start_point to Target_point

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Initialize Tree structure $'T'$;

FOR $i = 1: iteration\_number$

$x_{rand} \leftarrow Sample(Map)$;

$x_{near} \leftarrow Near(x_{rand}, T)$;

$x_{new} \leftarrow Steer(x_{rand}, x_{near}, Delta)$;

IF $CollisionFree(x_{new})$

$X_{near} \leftarrow Find\_Neighbor\_points(T, x_{new})$;

$x_{min} \leftarrow ChooseParent(X_{near}, x_{new})$;

$T \leftarrow Expand(T, x_{min}, x_{new})$;

$T \leftarrow Reshape(T, x_{new})$;

End IF

End FOR