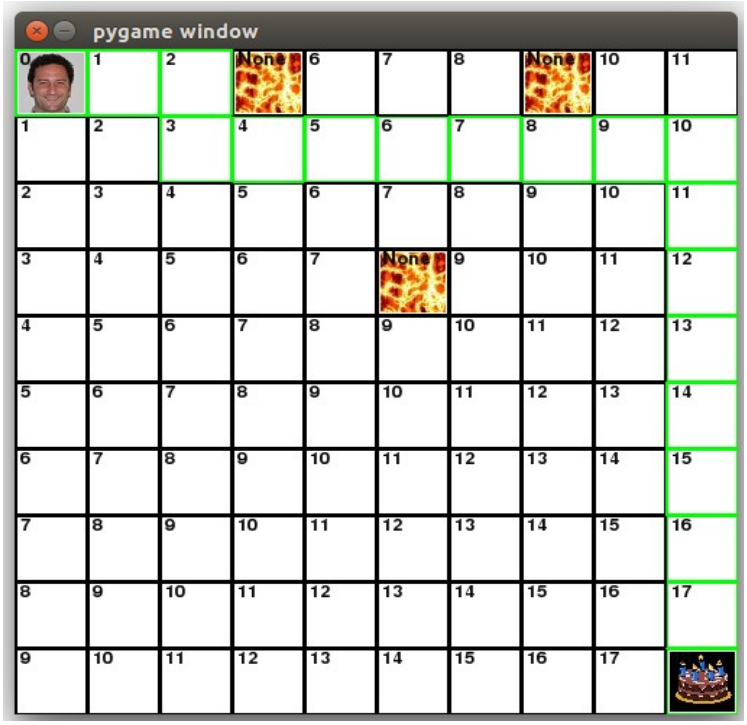
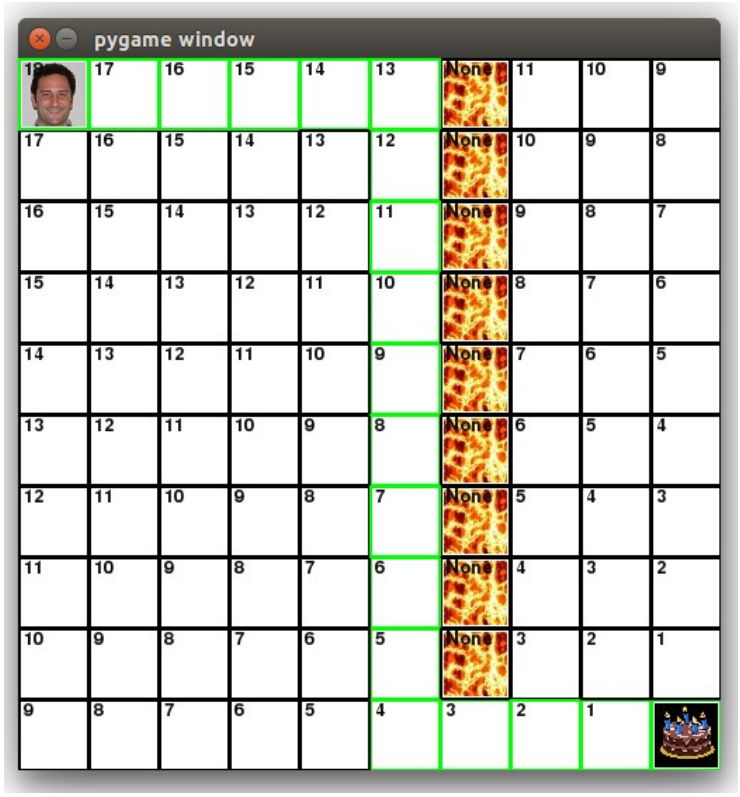
AI and Algorithms Toolbox

Uma Desai

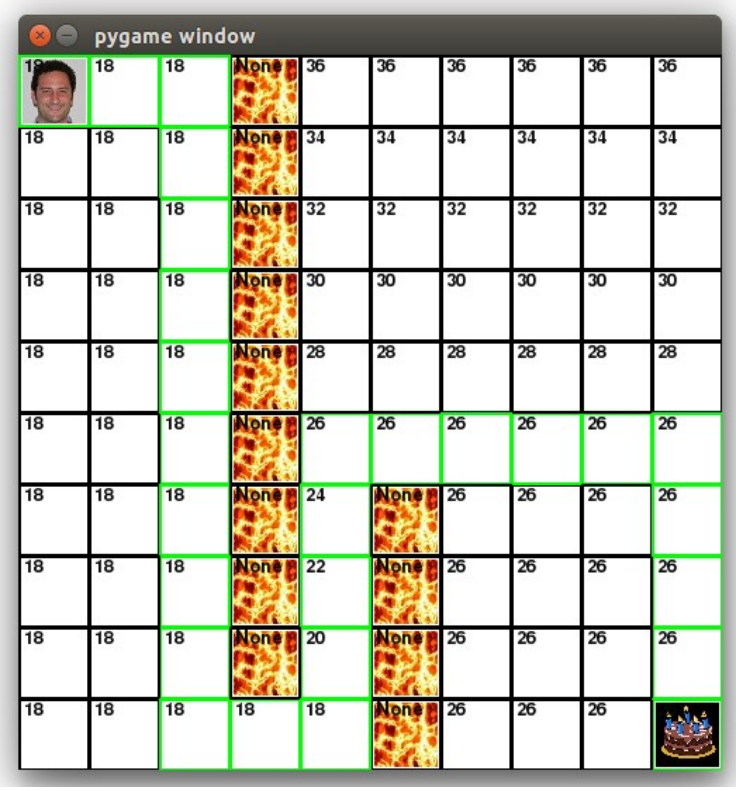
g_cost = cost of getting to that tile from the starting point



h_cost = cost of getting to the cake from that tile



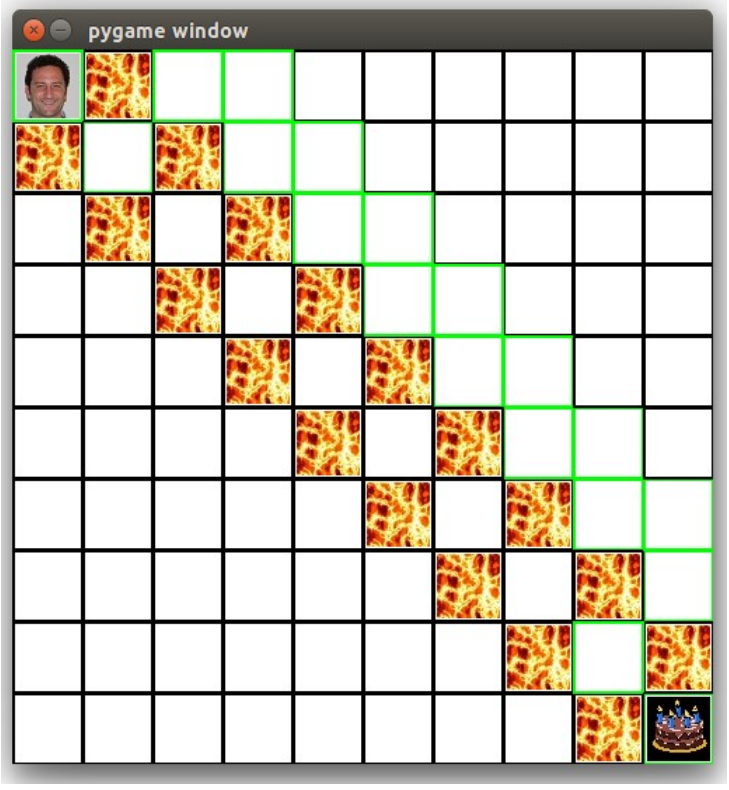
f_cost = the predicted cost based on the current tile (disregarding the lava) and the cost already spent



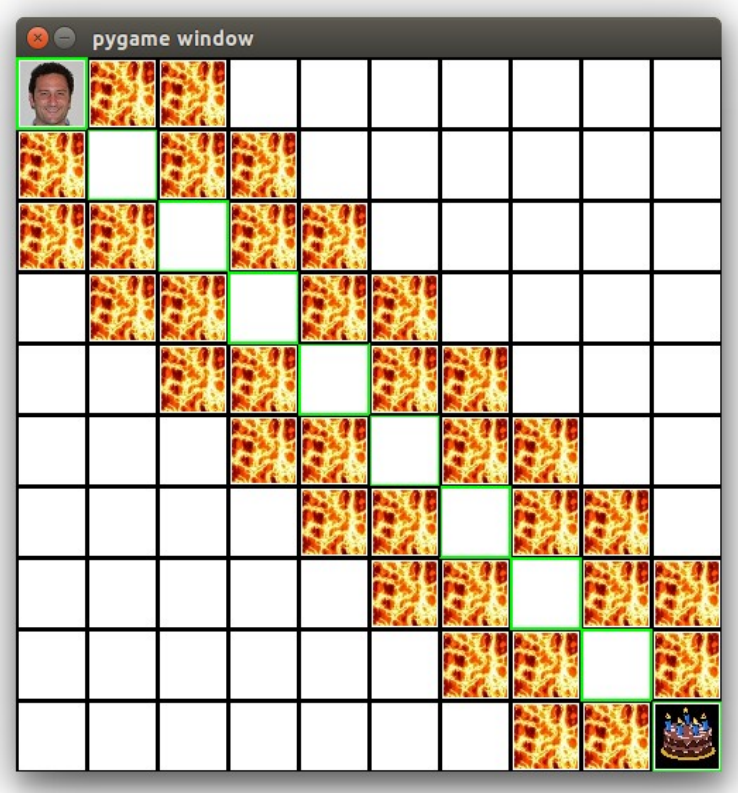
In this screenshot you can see that the f_cost is 18 up until Paul is no longer taking a direct path to the cake. The f_cost increases with each step upwards because it does not take into consideration the lava as an obstacle for the predictions.

Paul Gets Diagonals

In this screenshot, Paul moves diagonally on the first two and last two moves because he has no other choice due to the positioning of the lava. For the middle steps, Paul moves down and right because the cost is less.

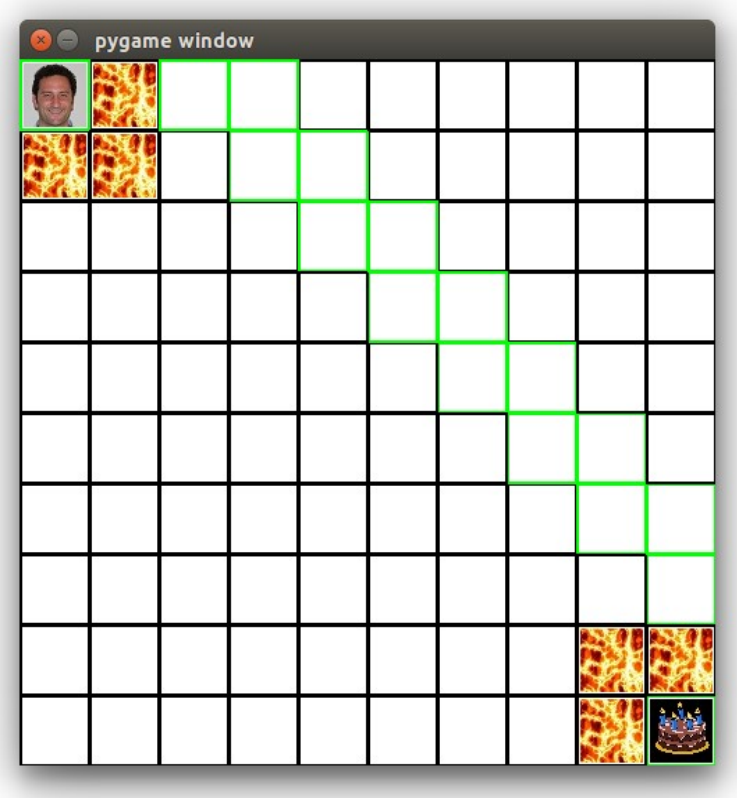


In this screenshot, Paul moves diagonally across the board to the cake because that is the only option considering the positioning of the lava.



Paul Gets Hops

In this screenshot, Paul hops over the lava on the first and last moves because that is the only way to avoid the lava and get the cake. The rest of the moves don't involve hops because that would not at all be cost efficient, so Paul only hops if there's no other option.



Paul Gets Swamped

This final screenshot shows that Paul can move through the swamp, but because of the extra movement point costs of doing so he mostly avoids the swamp when possible, even employing the use of a hop and diagonal to get where he needs to go.