```matlab
pub = rospublisher('/raw_vel');
msg = rosmessage(pub);
sub_bump = rossubscriber('/bump');

start_pos = [2 0];
bob_pos = [1 6];

turn_angle = 90 + atand((bob_pos(2) - start_pos(2)) / (bob_pos(1) - start_pos(1)))
```

```
turn_angle = 9.4623
```

```matlab
[time, Vl, Vr] = turn(turn_angle);
```

```
time = 0.0908
```

```matlab
tic
msg.Data = [Vr, Vl];
send(pub, msg);
pause(time);
msg.Data = [0.2, 0.2];
send(pub, msg);

while 1
    %Sense for bump:
    bumpMessage = receive(sub_bump);
    if any(bumpMessage.Data)
        msg.Data = [0.0, 0.0];
        send(pub, msg);
        break;
    end
end
toc
```

```
Elapsed time is 8.610022 seconds.
```

```matlab
function [time, Vr, Vl] = turn(theta)
    speed = 0.2;
    time = (theta*.22*3.1415926535)/(360*speed)
    if theta < 0
        Vr = speed;
        Vl = -speed;
    else
        Vr = -speed;
        Vl = speed;
    end
end
```