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## Skunks

Version: 4.0.0

Author: [Matei](#)

Category: Simulation

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Car simulation based on Open Dynamics Engine

3D game with cars, stunts and software rendering, based on Open Dynamics Engine; SDL library is used for displaying the image and no 3D accelerator is required (or supported).

License: free

Additional System Requirements: SDL - [www.libsdl.org](http://www.libsdl.org) ODE - [www.ode.org](http://www.ode.org)



Sound:	Play in X:	Play in Console:	Multiplayer:	Network Play:	3D Acceleration:	Source Available:
yes	yes	no	no	no	no	yes

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*Submitted by [Matei](#) on 2010-09-28.*

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**Impressive, and has potential.** posted by [Draconishinobi](#) @ 109.98.200.133 on Feb 28 2012 10:27 AM ★★★★★

I like it, and it has potential. The main problems I have with it:

The car rolls over really really really easy. This is likely because it has no suspension of any kind. So, my recommendations are:

- 1) Add suspension.
- 2) Add simple ABS and traction control. This may be more difficult, but it can be as simple as applying no acceleration to a wheel that loses contact or grip with the ground. Not sure how easy this is to implement, but I'll look it up in ODE.

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**Re: Impressive, and has potential.** posted by **Draconishinobi** @ 109.98.200.133 on Feb 28 2012 10:32 AM



I've found something, see [Stop rolling over](#)

[\[Reply\]](#)

**Re: impressive, and has potential.** posted by **Matei** @ 82.77.99.95 on Feb 28 2012 10:53 AM

1. The cars do have suspension. The parameters of the suspension are in the files from the directory "cars". It just takes practice to control them, just like with real cars. If you really want stability, use "car5". I already read the thing about anti-sway bars, but that applies to real cars, which have much softer suspensions. With the cars in this game, which have very stiff suspensions anyway (they have to jump tens of meters), anti-sway bars wouldn't have that much of an effect.

2. I have good news for you. I also made a game with a car that has wonderful ABS, traction control, ESP and all sorts of automatic systems (i.e. the game has no physics). Its called "simcar", can be found at <http://simple3d.sourceforge.net> and I only thought of it as an experiment until now. But who knows?

Last but not yeast, I made "skunks" especially for myself and I am quite pleased with how version 3.0.0 turned out (I never really liked 2.0.0 and especially 1.0.0). What I would like to do now is to create a physics engine myself; not because I don't like Open Dynamics Engine, which is great and awesome, but because it would be very interesting.

[\[Reply\]](#)

**Re: Impressive, and has potential.** posted by **Matei** @ 82.77.99.95 on Feb 28 2012 11:39 AM

Just one more thing: if I apply no acceleration to a wheel that loses contact with the ground, how am I supposed to control the car while it's flying? Really now ... (this is also specified in "README" file). And applying acceleration to a wheels tha lose grip is essential for drifting.

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**Re: Impressive, and has potential.** posted by **Draconishinobi** @ 109.98.200.133 on Mar 1 2012 11:42 AM



I see the suspension now, I've also tried car5 and tried tweaking the settings, it's still hard to control the car. Maybe I will try using a joystick or something.

[\[Reply\]](#)

**Re: Impressive, and has potential.** posted by **Matei** @ 188.26.144.147 on Mar 1 2012 1:09 PM

To make the car easier to control, you could:

- make the wheels heavier - open "cars/car1" and replace "0.05" with "0.25" at lines 6, 7, 8 and 9, after "sph"; that's the mass of the wheel, in metric tons;
- reduce the number after "accel", at line 10 (same file) and make the car slower;
- lower the body of the car - reduce the 3rd number on line 5, which is its initial coordinate on axis X (axis X is vertical); 4th and 5th numbers are coordinates on Y and Z, 2nd number specifies the function of the object (1 - body, 2 - wheel, 3 - motor wheel, 4 - steering wheel, 5 - motor and steering wheel) and 1st number specifies the object type, from the list above (which starts with "objtypes")

I found controlling these cars very easy after a little practice, both with the keyboard and with a joystick (maybe somewhat harder with a joystick). By editing the file mentioned above, it's also easy to make a car with any number of wheels (3, 4, 10, ...), rear wheel steering etc. (I should have written that somewhere in the documentation).

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**Re: Impressive, and has potential.** posted by **Draconishinobi** @ 109.98.200.133 on Mar 2 2012 12:30 PM



Alright, thanks for the info. I have made a car that works well for me. I increased the weight of the body to 3, and a bit for the tires to 0.1, and I put the springs at 100 and damper at 25. This makes it act more controllable.

My only other request, is it possible to make a camera that follows the car from behind but doesn't bob up and down with the car (makes me dizzy). They have this type of camera on games like Gran Turismo.

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**Re: Impressive, and has potential.** posted by **Matei** @ 79.115.57.15 on Mar 2 2012 2:46 PM

That's easy. Open "src/game.h" and replace lines 30 ... 36 (all "case 1") with this:

```
case 1: h=1.5; d=-4;
        x0=pos[0]; y0=pos[1]; z0=pos[2];
        camera->vx[0]=x0; camera->vy[0]=y0; camera->vz[0]=z0;
        camera->vx[1]=x0+rot[0]; camera->vy[1]=y0+rot[4]; camera->vz[1]=z0+rot[8];
        camera->vx[2]=x0+rot[1]; camera->vy[2]=y0+rot[5]; camera->vz[2]=z0+rot[9];
        camera->vx[3]=x0+rot[2]; camera->vy[3]=y0+rot[6]; camera->vz[3]=z0+rot[10];
        translat(camera,h,h*rot[4]+d*rot[6],h*rot[8]+d*rot[10]);
        a=asin(rot[1]);
        rotab(camera,camera->vx[0],camera->vy[0],camera->vz[0],camera->vx[3],camera->vy[3],camera->vz[3],a);
        a=-asin(rot[2]);
        rotab(camera,camera->vx[0],camera->vy[0],camera->vz[0],camera->vx[2],camera->vy[2],camera->vz[2],a);
        break;
```

Then recompile (./comp). Works with the tracks on which the car doesn't have to get upside down (track1, track6 and track7).

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**Re: Impressive, and has potential.** posted by **Draconishinobi** @ 109.98.200.133 on Mar 3 2012 11:10 AM



Thanks, that helps a lot. The game has become a lot better for me :)

[\[Reply\]](#)

**Re: Impressive, and has potential.** posted by **Draconishinobi** @ 109.98.200.133 on Mar 3 2012 11:40 AM



Here is the best car I was able to make:

```
objtypes 2
data/car.geo data/car3.col data/car.ref data/car.cld
data/wheel.geo data/wheel.col data/wheel.ref data/wheel.cld
objects 5
1 1 2.7 0 7 box 3 0.7 1 3
2 3 2.7 -0.7 6 sph 0.1 0.4
2 3 2.7 0.7 6 sph 0.1 0.4
2 5 2.7 -0.7 8 sph 0.1 0.4
2 5 2.7 0.7 8 sph 0.1 0.4
accel 1
brake 1.7
spring 100
damper 25
friction 1.0
```

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**Re: Impressive, and has potential.** posted by **Draconishinobi** @ 109.98.200.133 on Mar 3 2012 12:39 PM



Also, I edited the tracks using linux commands to remove a large number of trees and light poles. I like to drift at high speed and they were getting in the way.

[\[Reply\]](#)

**Re: Impressive, and has potential.** posted by **Matei** @ 86.127.141.160 on Mar 3 2012 1:11 PM

That's no car, that's a tank. It's too heavy (3.5 tons), too slow ("accel 1.7" wouldn't make it harder to control, just faster), too low for loops (doesn't even get half way up) and I'm also against deforestation, but I'm glad you like it.

I find that if the cars are too easy to control, the game is boring. Besides, I think that if you take an ordinary car (not a racing car) and drive it at > 80 km/h just like you do in this game, it would roll over just about as easy as "car1". The difference is that in a real car you feel the inertial forces and the steering wheel is much more precise, so you are forced to drive it much more gently.

[\[Reply\]](#)

**Re: Impressive, and has potential.** posted by **Draconishinobi** @ 109.98.200.133 on Mar 4 2012 3:49 AM



I tried to make it as much like a real car as possible. It's true it can't do loops, but then neither can normal cars :) It can do some cool power slides tho.

[\[Reply\]](#)

**Nice but has flaws** posted by **Pulfer** @ 80.243.74.47 on Feb 27 2012 7:08 AM



The game itself is nice but it seems to be designed to run from the user dir. It could be nice to see in the next version support for searching game data and configs in /usr/share/[something]. As well as some kind of frontend to select car and track.

[\[Reply\]](#)

**Re: Nice but has flaws** posted by **Matei** @ 188.27.207.200 on Feb 27 2012 8:28 AM

Those are not flaws, they are features: 1 - The game runs from its directory because I like all the files in one place, so that I don't get confused about where they are. It's also easier to port the game to other operating systems. 2 - The fact that I don't want a menu (or frontend, as you call it) is explained in "README", along with the reasons why. But this is free software, so if anybody wants to make such a frontend (maybe something with Python and GTK could work) can do it and then post the improved version of the game somewhere. I would really appreciate any contribution.

[\[Reply\]](#)

**Skunks** posted by **kosyh** @ 83.220.32.66 on Sep 30 2010 10:46 AM

Very good :) Please, make menu and some tracks/cars and it will be awesome game.

[\[Reply\]](#)**Re: Skunks** posted by **simcop2387** @ 76.17.8.201 on Nov 25 2010 7:11 AM

Yes i hope it can stick around more than Ultimate stunts.

[\[Reply\]](#)**Re: Skunks** posted by **pilesofspam** @ 74.190.71.159 on Feb 22 2011 4:14 AM

Reminds me of a game I used to play 20 years ago back in the arcade- called 'Hard Drivin'. Fun!

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