

CS 1301 — Homework 8 – Lights, Camera, Robot Action!

Due: Friday, April 13th, before 11:55 PM EST

Out of 200 points

Files to submit:

- **{filmingCode.py**
- **actingCode.py**
- **editingCode.py**
- **performanceCode.py}**
- **movie.avi or movie.wmv or movie.mov, or movie.gif**
- **project_write-up.txt**
- **team_evaluation.txt**

For Help:

- TA Helpdesk – Schedule posted on class website.
- Email TAs
- Newsgroups

Notes:

- **Don't forget to include the required comments and collaboration statement (as outlined on the course syllabus).**
 - **Do not wait until the last minute to do this assignment in case you run into problems.**
 - If you find a significant error in the homework assignment, please let a TA know immediately.
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Lights, Camera, Robot Action!

You have the special effects, the robots, and now all you need is the inspiration to compose your short-length robot feature film. The robots will be the actors, the camera, and the stars of the movie. Together, your group will shoot and edit a 30-120 second movie with the robots. This assignment is very open to the director's choice of genre.

Here are a few examples from past years:

[RoboMovie](#)

[Pacman\(\): Try and Except Error!](#)

[The Scribbling](#)

Grading

This assignment is worth a total of 200pts, so we stress that you do **not wait until the last minute to complete this assignment**. 100pts of the project will be code-based (i.e. Filming Code, Acting Code, Editing Code, and Performance Code). The other 100pts will be split up into The Film, Project Write-up, and the Team Evaluation. Both the Project Write-up and Team Evaluation should be submitted as .txt files. Every member of the group needs to submit the same code, film, and project write-up. The team evaluation should be different for each member in the group.

- Filming Code (30pts) – Although you may choose to use images from other sources if you want, at least 60 frames used for the footage of your movie must be taken from the robot's camera. The filming code is code that uses the robot to capture these images.
- Acting Code (20pts) - Robot(s) should do some kind of interacting with other robot(s) and/or the environment while being filmed. The acting code controls your robots. You can use more than two robots or you can just use one robot and film the environment with it. It depends on your scenario. The acting codes control your robots like movements during acting, turns, and so on. If you need "extra" robots you can come to the TA helpdesk to film portions of your movie with multiple robots in it.
- Editing Code (30pts) – Editing code is code used to edit the film, apply special effects, setting delays between scenes, etc. You can apply some special effects using outside programs, but you should use **at least 3** of the special effects you created for the last assignment.
- Performance Code (20pts) – This code resides in its own file and plays back the individual images as a complete film and *may* add interesting music or narration. Ideally this series of images will be the images captured by the screen capture tool (see below) or images that will be used in the 3rd party editing program. Regardless of how you capture the film, your performance code will still need to, at the very list, show each individual image.
- The Film (30pts) – The short-length motion picture should be between 30-120 seconds in length. This is a final movie file you have done with any kind of editing including using third party video editors or other tools you might want to use. You can use some music not related to this course, or special effects not from Python. To find good editing programs to use, see the last part of this document. When creating your film, through any of the above-mentioned methods, you are allowed to use outside (non-scribbler) music. Keep in mind that if you do not have permission from the copyright owner of the music, you can't post the video on Youtube or show it to others, so it might be better to use copyright free music!

- Project Write-up (20pts) – The project description text file is broken down in two parts: 1) Describe (in English, not Python) what your movie is about and the special effects you used. 2) Describe and justify any deviations you made from the code layout we have provided above. If you made no such deviations, go ahead and state that no deviations were made.
- Team Evaluation (50pts)
For team evaluations: Each member of the group should also submit an individual file (team_evaluation.txt) which contains:
 1. Your name, and the name of the other team member(s).
 2. What you did, and what each of the other member(s) did.
 3. What percentage of work each team member did (should add to 100%) (i.e. if two people contributed equally, each person gets 50%)

Notes:

In semesters past, people have found it convenient to break each type of code (acting, filming, editing, etc...) into its own code file. You are not required to use this approach, but please tell us about any deviations you make (for example, if you need to mix the acting code and filming code into one file, then explain and justify that in your teams project write-up text file.) Also, comments throughout your python file(s) will greatly help your TA when grading the assignment.

Don't forget that you have the ability to import code files that contain already-defined functions into other files. Hence, if you have a file named specialFx.py, which contains all of your special effects, you can create a new python file, and at the top type: 'from specialFx import *'. You will now have the ability to use any of the functions you defined in the specialFx file in your new file.

Extra Credit:

In each recitation awards will be handed out based on the movies in their own recitation. The TA's for each section will sift through all of the movies and decide which movies are awarded. Each individual award is worth 10 extra credit points and a total of up to 5 awards may be given out per recitation.

- The Walter Award for innovative robot camera work.
- The Walter Award for outstanding robot performance.
- The Walter Award for excellent audio accompaniment.
- The Walter Award for stellar special effects.
- The Walter Award for superb screenplay.

Resources:

Various software for video capture from your screen can be found here:

http://en.wikipedia.org/wiki/List_of_screencasting_software

You can use external film editing programs to finalize your robot movies. For students who do not know much about editing programs, we suggest several popular programs. For sharewares, you can get demo versions on the internet.

Freeware

Windows Movie Maker (for Windows)

Shareware

Apple iMovie (included in iLife) (for Mac)

Sony Vegas (for Windows)

NeroAG Nero Vision (for Windows)

Adobe Premiere (for Mac and Windows)

[TechSmith Camtasia \(for Mac and Windows\)](#)

Grading

FILMING CODE (30pts)

The code generates at least 60 frames by using the robot **15pts**

The code will perform a similar functionality even if we re-run **15pts**

ACTING CODE (20pts)

The code will perform a similar functionality if we re-run **10pts**

The code contains a series of commands to move robot(s) **10pts**

EDITING CODE (30pts)

The code uses at least three special effects (6pts each) **18pts**

The code applies the three special effects correctly **12pts**

PERFORMANCE CODE (20pts)

Can replay the movie using python code **20pts**

(Does not have to replay the whole movie, just robot pictures)

THE FILM (30pts)

Film is between 30 - 120 seconds (no more, no less) **10pts**

Film is playable on TAs' computers **10pts**

Film is similar to the video created by the performance code **10pts**

PROJECT WRITE-UP (20pts)

Movie description is clear, concise and accurate
Any deviations made are described and justified

10pts
10pts

TEAM EVALUATION (50pts)

Get generally good feedbacks from teammates

50pts