# **CVI620/DPS920**

# **Project- Milestone 1**

Please complete this milestone with your **group**.

1. Choose what you would like to do.

We talked about the applications of Computer Vision in the first class. Review the slides and choose an application.

1. Research.

Google the topic, read on Wikipedia, and scan through articles (use library search). Get a better idea of the steps required.

Other references:

* There are several examples in Chapter 10 of (available online through [Seneca libraries](library.senecacollege.ca/))

**[**[**A practical Introduction to Computer Vision with OpenCV**](https://senecacollege-primo.hosted.exlibrisgroup.com/permalink/f/t3376v/01SENC_ALMA5142810950003226)**]**

* Also see this book (available online through [Seneca Libraries](library.senecacollege.ca/) )

**[**[**Mastering OpenCV with Practical Computer Vision Projects**](https://senecacollege-primo.hosted.exlibrisgroup.com/permalink/f/603vi2/TN_vlebooksAH26943883)**]**

* A good website with many applications: <https://www.learnopencv.com/>

1. Narrow down the application, to make it suitable for a course project.

For example:

|  |  |
| --- | --- |
| **Broad topic** | **Narrow topic (Project Title)** |
| Object detection | Detecting a cell phone in an image |
| Face recognition | Two-factor authentication by face recognition |
| Tracking | Detection of the user in front of the webcam (did the user get up and go?!) |
| Tracking | Tracking a cat in a short video |
| Augmented reality | Augmented reality in a classroom (adding horns on teacher’s head!!!) |
| Video processing | A simple video player and editor |
| Video processing | Summarizing a video by choosing a few frames |
| Motion detection | Motion detection using a webcam (did anyone enter the room?!) |
| Image processing | Stitching images for panorama |
| Geometry | Finding my classmates heights using a calibrated camera |

1. Find at least three relevant references (links, articles, book chapters) for your project. Have at least one academic article among your references. In your project presentation, you will explain the methods and findings from these references. Attach pdf of these references to your submission.
2. Chunk down the project into at least 3 major steps and plan a timeline. Please see <https://www.lucidchart.com/blog/8-steps-to-build-a-project-management-timeline> for some guidance.
3. Complete the following form and submit with the attachments.

|  |  |
| --- | --- |
| Group # | : |
| Group members | : |
| Project title | : |

References/ existing implementations (also attach pdf of these references to your submission):

1-

2-

3-

Project timeline:

|  |  |
| --- | --- |
| Main components (Briefly explain) | Completion date |
| 1- |  |
| 2- |  |
| 3- |  |