

# Image Processing

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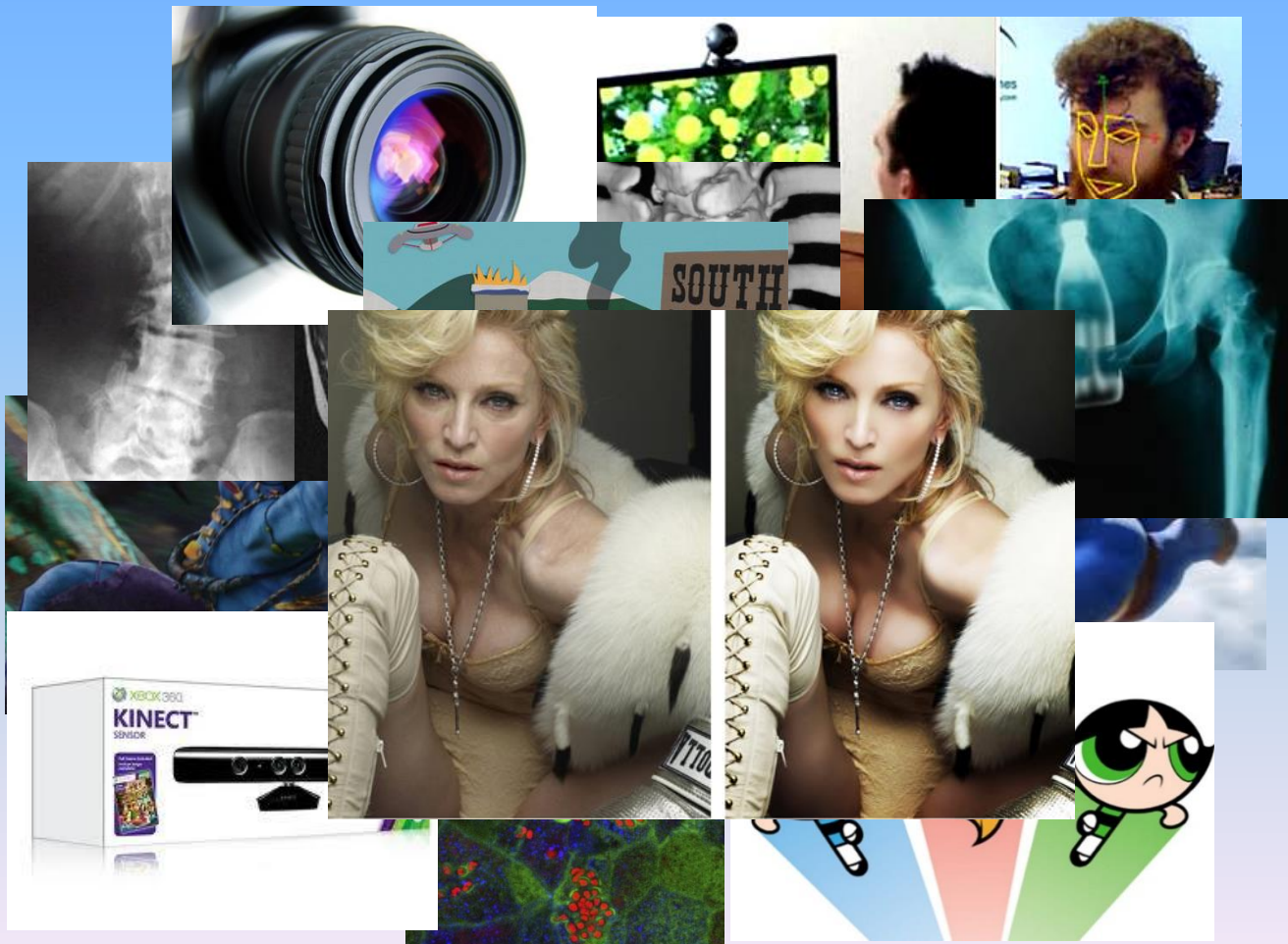
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# Applications



# Sample Coursework

# Master Forgery

I hereby grant this employee full unfettered access to company accounts.

Signed

The Boss

# Skin Cancer



# Previous Projects



# License Plate Extractor

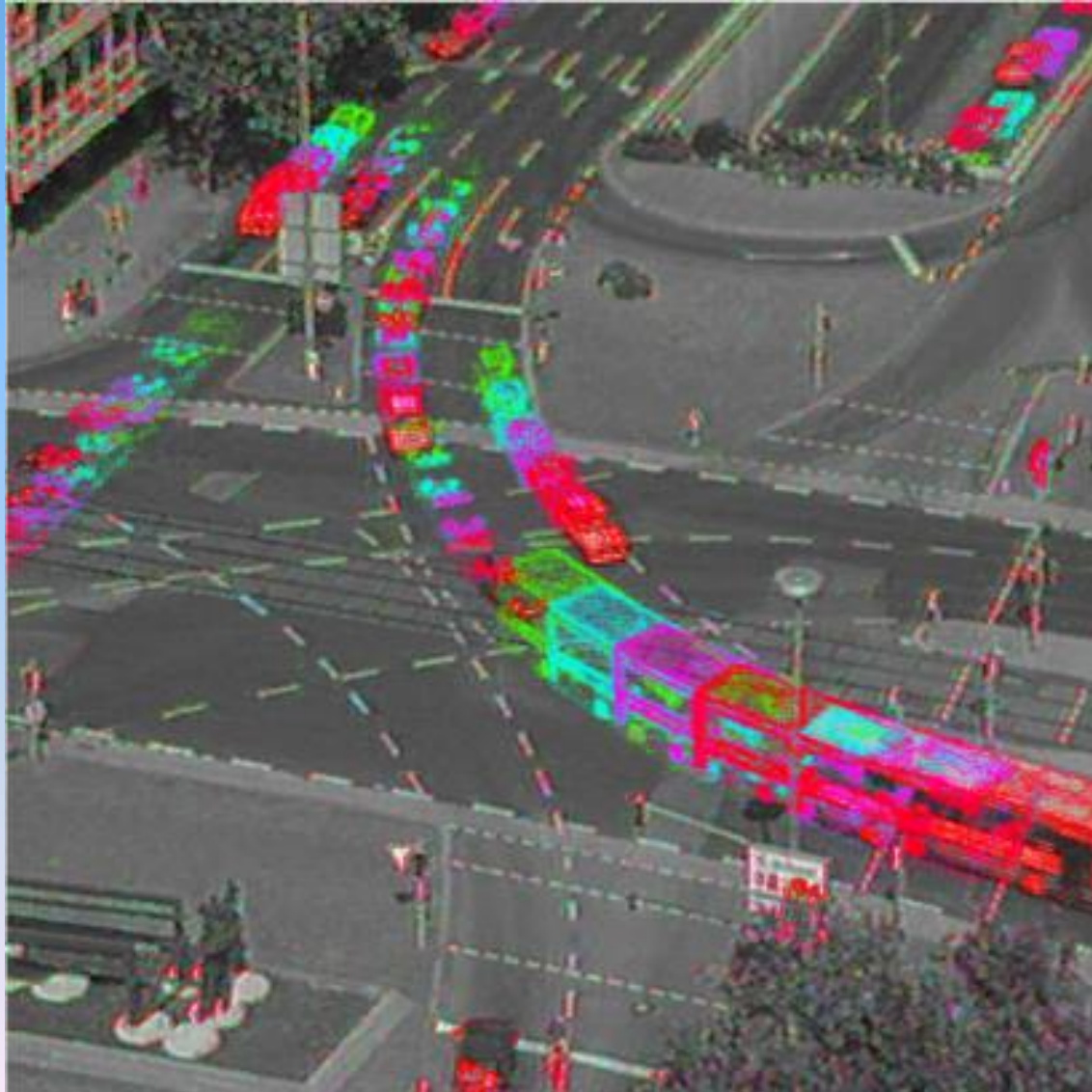


# Flesh Detector





# Motion Tracker



# Grade Breakdown

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100 % continuous assessment

3 main elements:

- Assignments: 40 %
- Project: 30 %
- In-class exam: 30 %

# Assignments

- 40 % of overall module mark
- 2-3 tasks throughout the module
  - Submitted as code
  - Grading Rubric...

Criteria	Outstanding	Very Good	Good	Acceptable	Poor
Design	30 points Design exceeds the main objective and works on all images of the required input type.	24 points Design meets the objective and works on test images.	18 points Design achieves the objective to some extent.	12 points Design does something useful towards meeting the objective.	6 points Design does not work.
Presentation	30 points Comments outline the algorithm in a structured way, comment on performance and detail the underlying concepts. Clear user interface.	24 points Introductory comments outline the algorithm in a structured way (step-by-step, pseudo-code). Simple user interface.	18 points Introductory comment outlines the algorithm used. Meaningful presentation to user.	12 points Code is commented. Understandable input/output.	6 points Limited commenting. Presentation to user unclear.
Innovation	20 points Research into existing methods leading to unique, optimised design.	16 points Research into existing methods leading to original solution.	12 points Research into existing methods demonstrated and used. Extends beyond module material.	8 points Working application of module material.	4 points Unoriginal work. Incorrect application of module material.
Implementation	20 points Efficient, optimised and well-presented code. Error checking. Structured presentation. Thorough testing done on other images as well as test images.	16 points Code is fully functional. Clearly presented with sensible variable names and meaningful indenting. Code is tested on test images.	12 points Code is fully functional and clearly written.	8 points Code runs without errors.	4 points Coding issues. Limited testing done.

# Project

- 30 % of overall module mark
- Work done throughout module
- Group design, individually assessed
- Presented at the end of the module
  - Peer and self assessed
  - Grading Rubric...



Criteria	Outstanding (25)	Very Good (20)	Good (15)	Acceptable (10)	Poor (5)
<b>Research</b>	Familiarity with up-to-date publications in the area; Detailed comparison with other methodologies; A detailed understanding and application of the theory demonstrated.	Detailed awareness of most relevant references; Investigation into alternative methodologies; Sound application of theory.	Good set of relevant references gathered; Familiarity with similar designs; Some awareness of theory demonstrated.	Some research in the area; Some awareness of existing designs.	Little research done; Few references.
<b>Design</b>	Innovative design. Systematically implemented and assessed. Design exceeds the main objective.	A clear approach to design outlined and followed methodically. Design fully meets the objective.	Some design procedure outlined and generally followed. Design achieves the objective to some extent.	Some design methodology demonstrated. Design does something useful.	No clear method in design. Design does not work.
<b>Presentation</b>	Full, comprehensive knowledge of the area demonstrated in presentation. Presentation is engaging. Significant contribution and insight in discussion.	Presentation demonstrates detailed understanding and is interesting. Insight offered in discussion.	Presentation clear and detailed. Ability to field questions. Contribution to other discussions.	Presentation clear. Ability to discuss concepts demonstrated.	Presentation unclear. Difficulty fielding questions. Little contribution to discussions.
<b>Management</b>	Engaging blog with demonstrations of methods and ongoing research and results. Project is well organised and progresses beyond main objective.	Detailed blog showing ongoing research and results. Clear progress and organisation from week to week.	Good blog, showing some research and findings. Progress evident.	Some blog records kept. Some progress throughout.	Limited blog maintenance. Poor organisation. Little progress.

# Exam

- 30 % of overall module mark
  - 2-3 hour in-class test
- Fully open-book (including online access)
  - Submitted as code
  - End of the module
  - Grading Rubric...

Criteria	Outstanding	Good	Poor
Does it work?	10 points Fully functional.	5 points With minor tweaks.	0 points Not at all.
User Interface	20 points Clear output and instructions (where necessary).	10 points Some meaningful output. Where instructions are necessary, they can be followed.	0 points No clear instructions or output.
Comments	30 points Clear, structured comments.	15 points Some explanation of algorithm attempted in comments.	0 points Little or no commenting.
Design	40 points Design fully meets specs and works on other images.	20 points Some contribution to specifications made.	0 points Design does not meet specifications.

# Environment

# Python with OpenCV

Python:

Anaconda for Python:

<https://www.anaconda.com/download/>

OpenCV:

In the command line type:

“pip install opencv-contrib-python”

\*Note: newer / older versions may work but these version do work

\* Video: if working with video, you may hit codec issues.

These are solved by installing a codec pack

(see online or ask for details)

# Brightspace

## Image Processing IDSP1701: 2019-20



### Introduction

1 of 3 Topics Completed



33%

Overview

[Continue](#)



### Assessment

1 of 4 Topics Completed



25%

Overview

[Continue](#)



### Notes



### Code

#### Announcements

There are no announcements to display.

[Create an announcement.](#)

#### Calendar

Thursday, 12 September 2019 

Upcoming events 



# Task : Project Selection

Select a project by inserting your name in the “Project Selection” Google Document beside the project of your choice.

(You can alternatively propose your own project by submitting a clear objective along with sample image(s) by the end of the week.)

Start a [Project Blog](#).

Questions?