Module: COMP6206  
Title: Advanced Computer Vision.  
Lecturer: Dr. J N Carter  
Prof. Mark Nixon  
Deadline: End of Semester  
Feedback: Immediate.  
Weighting: 40%

**Aim:**
- Learn by practice advanced techniques in Computer Vision.
- Demonstrate the results of their work
- Familiarity with implementing Computer Vision algorithms.
- Example work may be found at https://secure.ecs.soton.ac.uk/notes/comp6204/

**Objectives:**
Students working in groups (3-5) take a specific problem in Computer Vision and implement a working solution.

**Past Topics have included:**

**2011/2012**
- Iris Recognition
- Autonomous Stereo Wheel Chair.
- Face Image Fraud Detection
- Autonomous Wheelchair using structured light.
- Ball Tracking
- Face Detection and Identification
- 3D Reconstruction from Multiple Views.

**2012/2013**
- Ear Recognition.
- Analysis of Images of Turtles.
- Frontal Gait Recognition aided by a Kinect.
- Fooling Face Detection.
- Video Segmentation.

**Requirements:**
Each group will a single demonstration of their solution. This will take the form of a presentation explaining
- The theoretical background and techniques required to solve the problem
- Implementation issues

Demonstrate the solution at work. This will be their own implementation and they would be expected to take pictures/video during the session, process them and present results. This may involve real-time processing but that is not required.

**What to hand in:**
- Presentation material,
- Implementation code
- Test pictures and the
- Original source papers.
Submission and Feedback

Submission is via a CD/DVD given to the examiners during the demonstration session.

Feedback is immediate, publicly during the session.

Presentations are double marked by the examiners.

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<thead>
<tr>
<th>Relevant Learning Outcomes (LOs)</th>
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<tbody>
<tr>
<td>1. To build working computer vision systems.</td>
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<td>2. To appreciate the stock of technique available for computer vision</td>
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<td>3. To learn the principles of developing and applying computer vision</td>
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<td>4. To further practice (and perfect!) presentation techniques and group working.</td>
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<tr>
<th>Marking Scheme</th>
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<tr>
<td><strong>Criterion</strong></td>
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<tr>
<td>Presentation</td>
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<td>Demonstration</td>
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Late submissions will be penalised at 10% per working day. No work can be accepted after feedback has been given.
You should expect to spend up to 10 hours on this assignment. Please note the University regulations regarding academic integrity.