Segmentation
Object Recognition

- Spent a lot of time playing around with number of features, number of cluster (codewords), and number of pixels sampled from each image
- Found that using the BSXFUN function in Matlab significantly improved the run time of my scripts
### Confusion Matrix

<table>
<thead>
<tr>
<th></th>
<th>Car</th>
<th>Airplane</th>
<th>Elephant</th>
<th>Face</th>
<th>Minaret</th>
<th>Rhino</th>
</tr>
</thead>
<tbody>
<tr>
<td>Car</td>
<td>75.60%</td>
<td>0%</td>
<td>23.40%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>Airplane</td>
<td>17.20%</td>
<td>39.10%</td>
<td>0%</td>
<td>43.80%</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>Elephant</td>
<td>63.60%</td>
<td>0%</td>
<td>22.70%</td>
<td>11.40%</td>
<td>2.30%</td>
<td>0%</td>
</tr>
<tr>
<td>Face</td>
<td>7.60%</td>
<td>3.80%</td>
<td>0%</td>
<td>88.70%</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>Minaret</td>
<td>1.80%</td>
<td>0%</td>
<td>8.90%</td>
<td>3.60%</td>
<td>85.70%</td>
<td>0%</td>
</tr>
<tr>
<td>Rhino</td>
<td>79.50%</td>
<td>0%</td>
<td>20.50%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
</tr>
</tbody>
</table>
Object Recognition Success

- Good results for Minarets, faces, and cars
Objection Recognition Failures

- Confused elephants with cars
- Never detected rhinos???
- Limited success with planes
Progress of Project Ideas...

- Video Footstrike analysis
  - Issues:
    - Motion being examined is subtle
    - Different angles of camera
    - Continuum of pronation
  - Will probably just play around with this idea in my “free time”

- TrecVid
  - Pros:
    - Progress has already been made on it
    - Lots of room for experimentation
    - Incorporates much that we have already covered in the short course
    - Will make Marshall happy!