# Creating .obj in Blender

- Import .stl model
- Scale, rotate, and translate object to desired location.
  - To automatically center geometry on origin, press ctrl+shift+alt+c and select 'Geometry to Origin'
- Apply rotation, scale, and translate
  - bottom left corner, Object →Apply→Location, Scale, Rotation
- Switch from Blender Render to Cycles Render engine using drop down menu at top of screen
- Open 2 new windows using hashes in top right corner
- Using icon in bottom left corner of new windows, make one window a "Node Editor" and the other window a "UV/Image Editor"
- In Node Editor window, press '+New' to create a material for your object.
- In UV/Image Editor window, press '+New' to create a new image for your texture
  - choose a name and increase image size if you want more resolution for your texture. Typically only necessary for very large models.
- Return to the Node Editor window, Click Add → Texture → Image Texture. Place the resulting box in the Node Editor window, select the image you created from the little picture drop down menu in the box, and then draw a line from the yellow 'Color' circle in the 'Image Texture' box to the corresponding 'Color' circle in the 'Diffuse BSDF' box.
- In 3D view window (default window) press tab or use drop down menu to enter Edit Mode. Select all points by pressing 'A' until all of the points in the model light up orange.
- Press 'U' in 3D View window, select 'Smart UV Project' and press 'ok' in the new box.
- In the drop down menu currently labeled 'Edit Mode', select 'Texture Paint"
- Paint to your hearts content on either the 3D model or the texture image.
  - To paint on the texture image, select 'Paint' from the 'View' drop down menu at the bottom of the 'UV/Image Editor' window.
- After you have finished painting the texture, click on the 'Image*' menu in the 'UV/Image Editor' window and select 'Save as Image.' This will save your texture image as a .png file. You will have to convert this file to a .jpg file before it can be imported into Pylot
- To export the model, select File→ Export→ Wavefront (.obj)
- In the settings menu in the bottom left corner, do the following:
  - De-select 'Write Materials'
  - Select 'Triangulate Faces'
  - Set 'Forward' to 'Y Forward'
  - Set 'Up" to 'Z Up'
- Put your exported .obj file and the corresponding .jpg texture file into the res/ folder in the Pylot/ folder.
- Import into Pylot and enjoy!