CS 532: Homework Assignment 1

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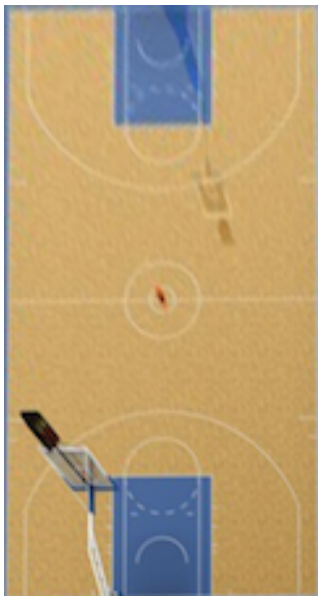
Files

- **prob1.m:** MatLab code for problem 1
- **prob2.m:** MatLab code for problem 2
- **output_prob1.m:** Image output for problem 1
- **output_prob2.m:** Image output for problem 2
- **normalization.m:** Auxiliary function

Problem 1. The structure in the code is simple. First step is to click in the corners of the court image. Then these pixels are ordered accordinly to the order of the correspondences. After that, the DLT algorithm is used to estimate the homography between these set of points. Then it's time to fill the blank image with transformed pixels. This is done by inverse warping and the colors are distibuted using bilinear interpolation. (Results below)

Problem 2. In the image above we can see that the basket (in the bottom of the image) apears in the image. And, in the real world, that would not happen. This occurs because the image is 2D and there's no information about the pixels that are behind the closest objects. To fix this, I assumed that everything on the floor is symmetric, so I applied reflections in the areas that had baskets (the one in the bottom and the shadow). (Results below)

Result 1



Result 2