Computer Vision Test

Task: You are expected to find the 6DoF pose* of the camera** in images img2 and img3 w.r.t. pose in reference image img1. Plot the trajectory. Refine the poses by using optimization based methods.
* solution for translation can be up-to-scale

** Assumptions for camera: aspect ratio is fixed, principal point is fixed (cx=960, cy=540) and there is no distortion in the camera
** For initial intrinsic guess, focal length for camera calibration could be set as f=100.
2D Points in “vr2d.npy”, 3D points in “vr3d.npy” are given as 2D-3D correspondences for a scene that taken from the same camera
as in img1,img2 and img3.

Please send your answers with following procedure:

1. **Deadline:** This week Sunday 22:00 (UTC +03:00) Istanbul
2. **To:** kivanc@4dsight.com; fatih@4dsight.com; cem@4dsight.com
3. Public github repository URL that contains your code and outputs
4. Your CV in pdf format as an attachment to the e-mail
    a. [PDF name format: “Surname_Name.pdf”]
5. Your Linkedin URL