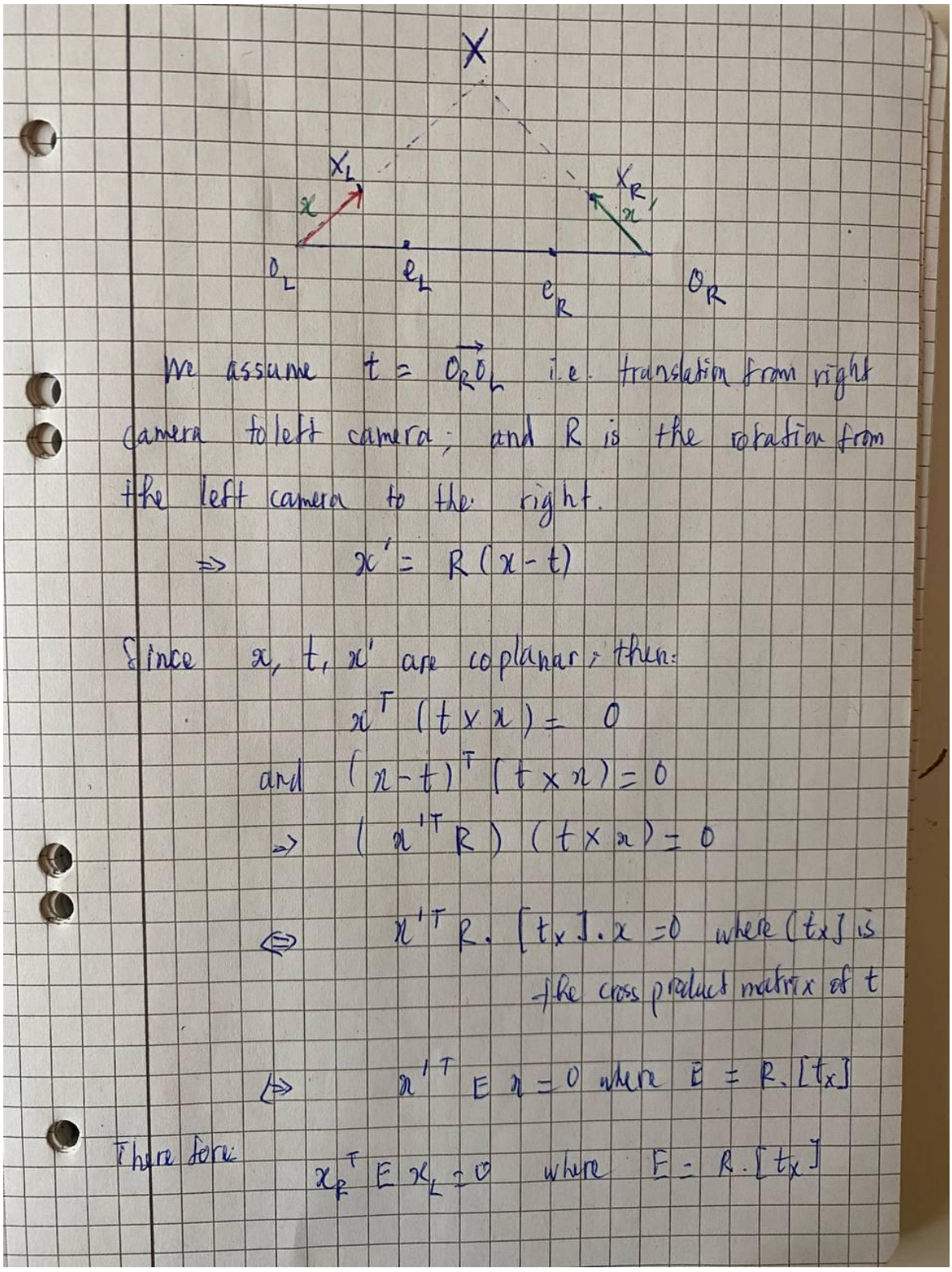
Name: Cuong Ha; Matrik. Nr: 03749410

Part 2: Epipolar constraint

Derive the computation of the essential matrix from the transformation between two cameras



Part 4: Bag-of-Words for Place Recognition

Compare the number of candidate pairs:

For n frame pairs i.e. 2*n images.

- Match all: 2n * (2n - 2) / 2 = 2n(n-1) candidate pairs
- Match bow: between 2n * (num_bow_candidates - 1) and 2n * num_bow_candidates

If num_bow_candidates is set to 25.

- Case 2 x 82 images:
    - Match all: 13284 candidate pairs
    - Match bow: between 3936 and 4100 candidate pairs.
- Case 2 x 1000 images:
    - Match all: 1998000 candidate pairs
    - Match bow: between 48000 and 50000 candidate pairs.

When the number of images grows, “Match bow” significantly reduces the number of candidate pairs compared to “Match all”.