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Assignment Lesson 10

1. What is sampling?

   Sampling is related to coordinates values (Nyquist frequency).
2. How to transform a 2D continuous signal into a discrete signal?

   There are 2 ways to do this:
   - Technological solution
     - Digital camera
     - Scanner for paper documents
   - Theoretical solution
     - Sampling theory
3. How to move geometrical objects?
   - Translation: moves an object a fixed distance to a different position. It is one of the simplest transformations.
   - Rotation: rotates the object at a particular angle Θ (theta) from its origin.
   - Scaling: changes the size of an object.
4. What is linear interpolation?
   - is a method used to estimate pixel values between two known pixel values in an image. It is a simple and commonly used technique for image resizing, scaling, or generating intermediate values.
5. Among 4 interpolation methods, in your opinion which one is the best? Why?
   - Among 4 interpolation methods, in my opinion the 3 interpolation is the best. Because it got the smoother and more stable than other interpolation and provides more continuous transition.