

Some Important Application Of Linear Algebra

1. Computer graphics :

- Computer graphics mainly uses matrix and does linear transformation (Translation, Scaling , Rotation, Shear)on this matrix to make GUI and related stuff better and more efficient .

2. Cryptography :

- In cryptography, scientist or ethical hacker uses cipher matrix to encode the message and than use the inverse of this cipher matrix to decode the message . Cipher matrix is a random matrix whose inverse is possible to decrypt the message .

3. Web page ranking :

- Google use Markov chain and some probability theory which is used to decide which page is to be ranked first .

4. Social network analysis :

- Social networks like facebook , instagram, twitter and related used advance version of adjacency matrix for recommendation of new friends and find mutual friend and some related kind of stuff .

5. Discrete time population models :

- This the field where the eigen value and vector are used most . Scientist and researchers use this concept to find the equilibrium in the population and related stuff .

6. Image Processing(ML & AI) :

- This is the branch where linear algebra plays the role of backbone . Because as we know that, the images are made of matrix and thus any operation on this images will require the knowledge of linear algebra .

7. Robotics :

- This is another field where linear algebra is used for rotation of arms of matrix and related stuff is performed by manipulating matrix .