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About Me

APPLICATION OF MATRIX

WHAT IS MATRIX

Matrix are the rectangular arrangement of numbers, expressions, symbols which are arranged in columns and row.

$$A = \begin{bmatrix} 1 & 4 & 5 \\ 2 & 7 & 3 \\ 8 & -3 & 1 \end{bmatrix}$$

MATRIX IN GOOGLE SEARCH

Stochastic matrix and Eigen vector solver in the page rank algorithms which are used in the ranking of page of google search.

Matrix in Message Codes

- Used for a programmer for coding.
- Encrypting a message is made as a sequence of numbers in binary format for communication.

Those purpose done by inverse matrix.

INVERSE MATRIX

Inverse of 2x2 Matrix

If $A = \begin{bmatrix} a & b \\ c & d \end{bmatrix}$ then

$$A^{-1} = \frac{1}{ad - bc} \begin{bmatrix} d & -b \\ -c & a \end{bmatrix}$$

Inverse of A

Determinant of A

Adjoint of A

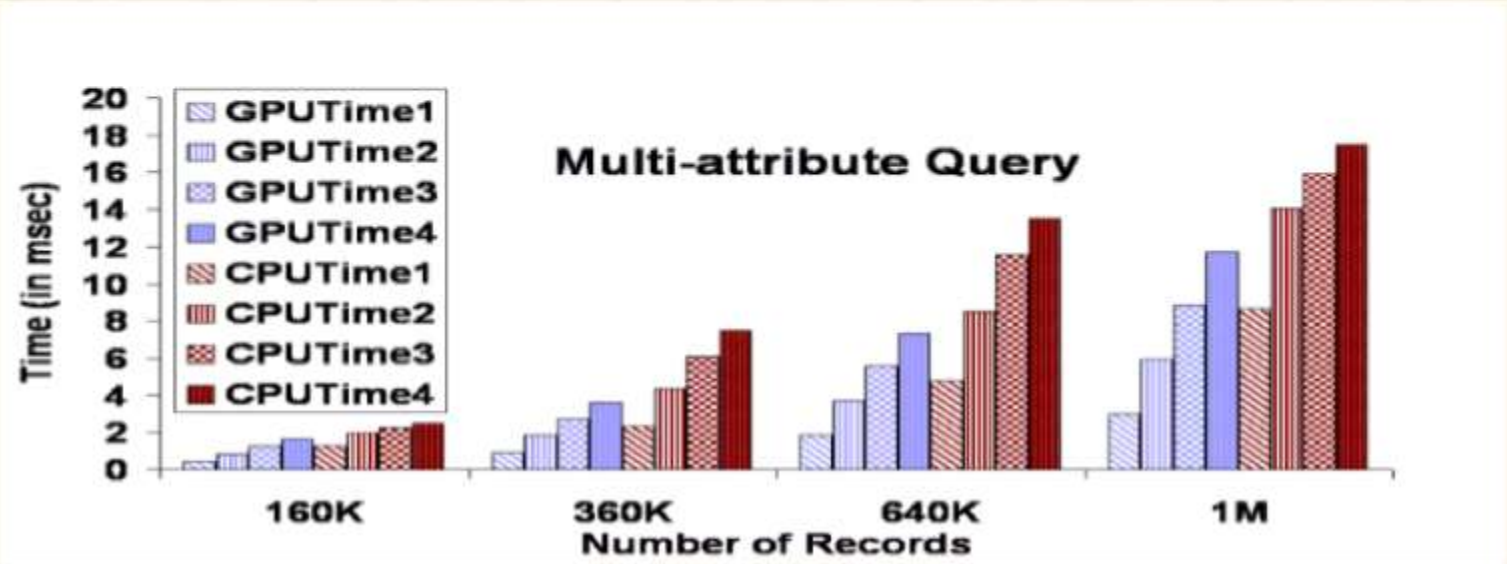
Note: A^{-1} exists only when $ad - bc \neq 0$

MATRIX IN ROBOTICS AND AUTOMATION

- **Checking Robot movements.**
- **Controlling robot.**

MATRIX IN GRAPHICS

- In Computer graphics, a full transpose of a 4x4 matrix can be done save some GPU operatins.



THANK YOU