# Ultimate Notes

## R4 Cheng

## June 14, 2024

**Def.** The rank of a matrix $A$ is the number of pivots.

## Permutation Matrices

- If $P$ is a Permutation matrix, then $P^T = P^{-1}$

- Inverse $(A^{-1})$ of $P_{21}$, $P_{32}$, $P_{31}$ are themselves