

$$\begin{pmatrix} a & 0 & 0 & 0 \\ 0 & b & 0 & 0 \\ c & 0 & d & 0 \\ e & 0 & f & g \end{pmatrix}$$

(a) Dense matrix

rowptr	0	1	2	4	7		
Col	0	1	0	2	0	2	3
Val	a	b	c	d	e	f	g

(b) Sparse representation (CSR)