symbolicMatrix

2024-08-04

$$X = U\lambda V$$
$$= \begin{pmatrix} u_{11} & u_{12} & \cdots & u_{1k} \\ u_{21} & u_{22} & \cdots & u_{2k} \\ \vdots & \vdots & & \vdots \\ u_{n1} & u_{n2} & \cdots & u_{nk} \end{pmatrix} \begin{pmatrix} \lambda_1 & 0 & \cdots & 0 \\ 0 & \lambda_2 & \cdots & 0 \\ \vdots & \vdots & \ddots & \vdots \\ 0 & 0 & \cdots & \lambda_k \end{pmatrix} \begin{pmatrix} v_{11} & v_{12} & \cdots & v_{1p} \\ v_{21} & v_{22} & \cdots & v_{2p} \\ \vdots & \vdots & & \vdots \\ v_{k1} & v_{k2} & \cdots & v_{kp} \end{pmatrix}^\top$$

```
A <- matrix(paste0('a_', 1:9), 3, 3)
b <- paste0("\\beta_", 1:3)
```

```
matrix2latex(cbind(A,b))
```

```
## \left[
##  \begin{array}{llll}
##   a_1 & a_4 & a_7 & \beta_1 \\
##   a_2 & a_5 & a_8 & \beta_2 \\
##   a_3 & a_6 & a_9 & \beta_3 \\
##   \end{array} \right]
```

$$\left[\begin{array}{llll} a_1 & a_4 & a_7 & \beta_1 \\ a_2 & a_5 & a_8 & \beta_2 \\ a_3 & a_6 & a_9 & \beta_3 \end{array} \right]$$