

The diagram illustrates the element-wise multiplication of a column vector  $z$  and a row vector  $\lambda^T$  to produce a matrix  $z * \lambda^T$ .

**Vector  $z$ :** A column vector with 15 elements: 0, 0, 0, 0, 1, 2, 1, 1, 0, 0, 0, 0, 0, 0, 0. The elements 1, 2, 1, and 1 are highlighted in orange.

**Vector  $\lambda^T$ :** A row vector with 15 elements: 0, 0, 0, 0, 0, 0, 0, 1, 1, 1, 1, 1, 0, 0, 0. The elements 1, 1, 1, 1, 1, and 0 are highlighted in orange.

**Operation:** The vectors are multiplied element-wise, indicated by the asterisk  $*$  symbol.

**Resulting Matrix  $z * \lambda^T$ :** A 15x15 matrix where each element is the product of the corresponding elements in  $z$  and  $\lambda^T$ . The matrix is mostly yellow (0), with a 4x5 orange block in the middle-right section where both  $z$  and  $\lambda^T$  are non-zero. The values in this block are:
 

1	1	1	1	1
2	2	2	2	2
1	1	1	1	1
1	1	1	1	1