



## Matrix Vector Multiplication

### 1 Why

### 2 What

#### 2.1 Notation

Let  $A \in \mathbf{R}^{n \times m}$  and let  $x \in \mathbf{R}^m$ . We denote the matrix-vector product of  $A$  with  $x$  by  $Ax$ , read “A x”.