



# 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”.