

## Inner Products

## 1 Why

TODO

### 2 Definition

Two vectors in an inner product space are *orthogonal* if their inner product is zero. An *orthogonal family of vectors* in an inner product space is a family of vectors for which distinct family members are orthogonal.

A vector is *normalized* if its inner product with itself is one.

# 2.1 Examples

#### 2.2 Notation

