
Subject: Re: 'vectorizing functions'

Posted by [JD Smith](#) on Tue, 06 Feb 2007 23:34:40 GMT

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Encode all vectors as 2xn. Change CALCULATE_LENGTH to:

```
sqrt(total(vector^2,1))
```

Change CALCULATE_ANGLE to:

```
l2=length1*length2
```

```
zero=l2 eq 0.0
```

```
cos_theta=total(vector1*vector2,1)/(l2+zero)
```

Note I change from matrix multiplication to TOTAL for the dot product, then add 1 to the denominator whenever the length is zero (which means the dot product is zero as well).

JD
