Hoversin formula

The mean radius of Earth is **3,959 miles** (**6,371 kilometers**).

[SELECT](http://54.218.26.77/phpmyadmin/url.php?url=http://dev.mysql.com/doc/refman/5.5/en/select.html) txtb\_id, ( 3959 \* acos( cos( radians(37) ) \* cos( radians( txtb\_latit )) \* cos( radians( txtb\_longi ) -radians(122) ) + sin( radians(37) ) \* sin(radians(txtb\_latit)) ) ) AS distance FROM tbluser having distance < 10 ORDER BYdistance

**The Haversine Formula in MySQL**

R = earth’s radius Δlat = lat2− lat1; Δlong = long2− long1a = sin²(Δlat/2) + cos(lat1) \* cos(lat2) \* sin²(Δlong/2)c = 2\*atan2(√a, √(1−a)); d = R\*c

**3956 \* 2 \* ASIN ( SQRT (POWER(SIN((orig.lat - dest.lat)\*pi()/180 / 2),2) + COS(orig.lat \* pi()/180) \* COS(dest.lat \*pi()/180) \* POWER(SIN((orig.lon - dest.lon) \*pi()/180 / 2), 2) ) ) as distance**

**angles need to be inradians**

**References**

http://www.scribd.com/doc/2569355/Geo-Distance-Search-with-MySQL