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Project: boost.geometry - antipodal points

- Availability: I intend on working on this project full time: I will start as soon as the program begins (specified start date). I do have exams on the first weeks of June, so my time will be limited. Full time availability will commence around June 10.

1 Background

I am new to the computer science program at UCLA. I was a community college student before, majoring in physics and mathematics and now I am continuing my interests in computer science. Relevant coursework to computer science includes: programming in C++, algorithms, Software engineering.

2 Why BOOST?

Part of my fascination with c++ is the ability to abstract objects- and I enjoy that. Now, as to why I specifically chose BOOST; I have a love for mathematics and algorithms and truly believe the library helps mend these two concepts beautifully

3 Competency test

For the competency test, I familiarizd myself with the design rationale that BOOST uses. I used templates to attempt to maintain the "library" as generic as possible. In comparing with BOOST's distance algorithm, the structure to represent points on earth is similar to the representation that BOOST uses for point_xy. However, the representiation that I used represents lattitude and longitude, not coordinates on a cartesian plane.
algorithm : I used the great earth circl formula, to calculate the shortest distance between two points on a sphere. Speciifcally I used a an approximation for points that are not too far apart. In comparing the result of the algorith I used with an example from another website the result was within acceptable error. I will provide a link with my comparison.

4 timeline

TODO: add a table of the timeline