Finding POI algorithm

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1 Algorithm

Require: A trajectory sample T of size n, where $n \geq 0$
Result: A list of POIs ordered by time
GPS Point $A = 0$
By order of list find GPS Point B where B.time - A.time $\geq minTime$
while available A and B exist **do**
  if distance(A,B) > Eps **then**
    $A \leftarrow$ midpoint between A and B
    $B \leftarrow$ the first GPS Point where B.time - A.time $\geq minTime$
  else
    for all GPS point P between A and B **do**
      if distance(A,P) > EPS or distance(B,P) > EPS **then**
        $A \leftarrow$ midpoint between A and B
        $B \leftarrow$ the first GPS Point where B.time - A.time $\geq minTime$
      else
        Create a list of all points between A and B and add the list to $PointOfInterest$
        $A \leftarrow B + 1$
        $B \leftarrow$ the first GPS Point where B.time - A.time $\geq minTime$
      end if
    end for
  end if
end while