EPSRC Vacation Scheme: Week 1 Review

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26^{th} July 2021

Goals of last week

1. Implement 'by eye' algorithm for finding convex hull of piecewise linear functions.

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2. Look around in literature to see what I could find.

Task 1 Progress

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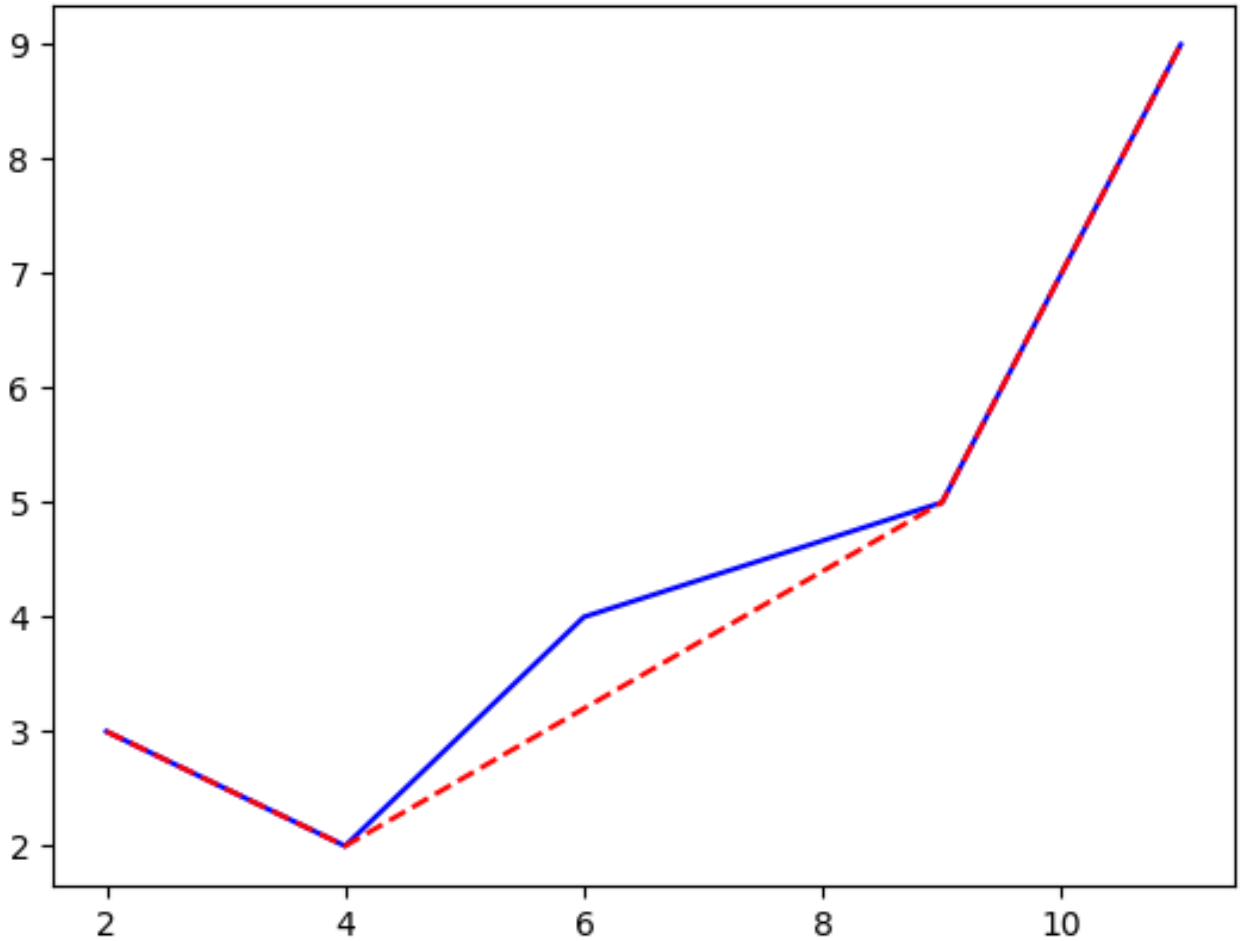
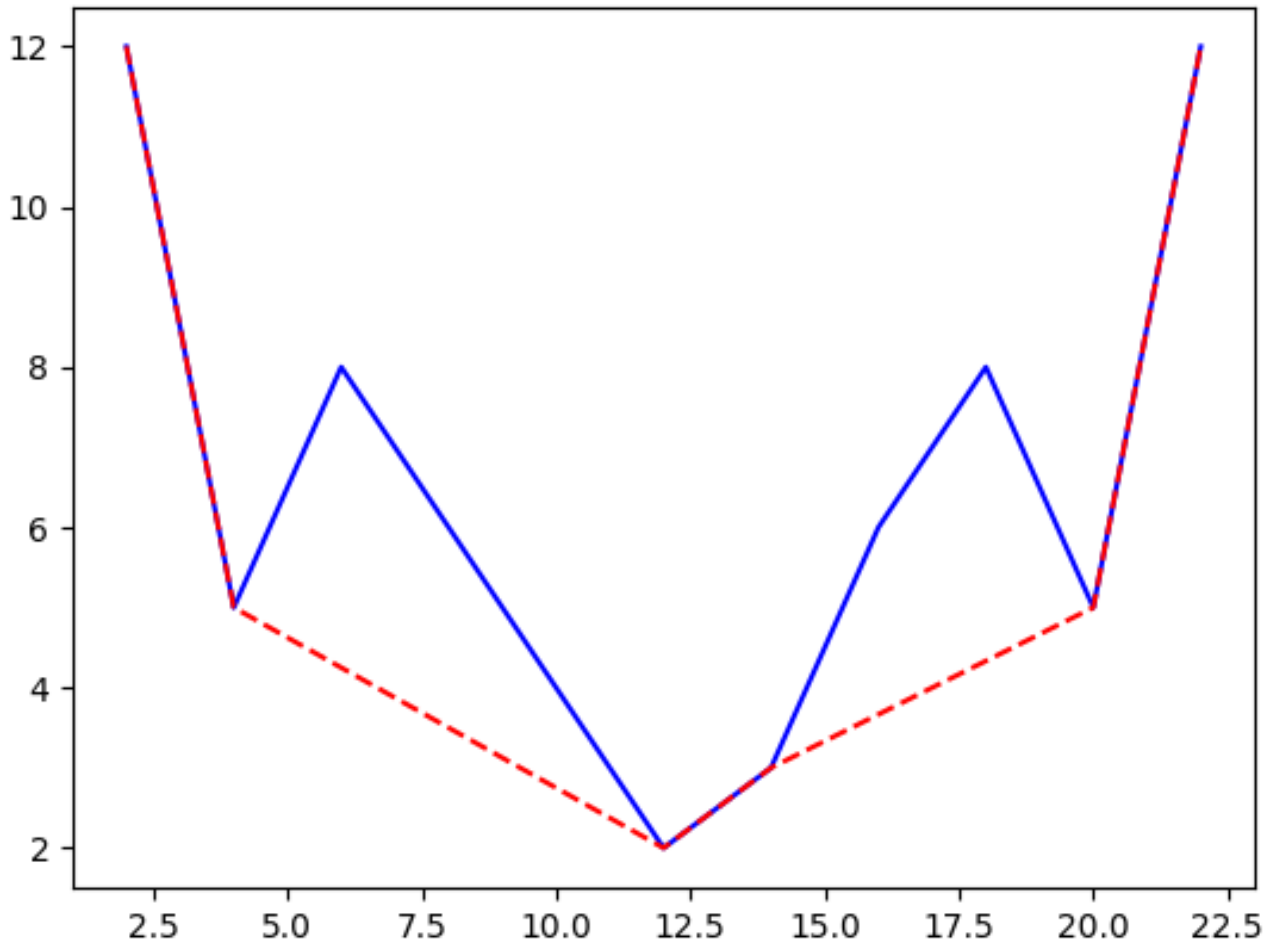
- You will notice that they are not perfect

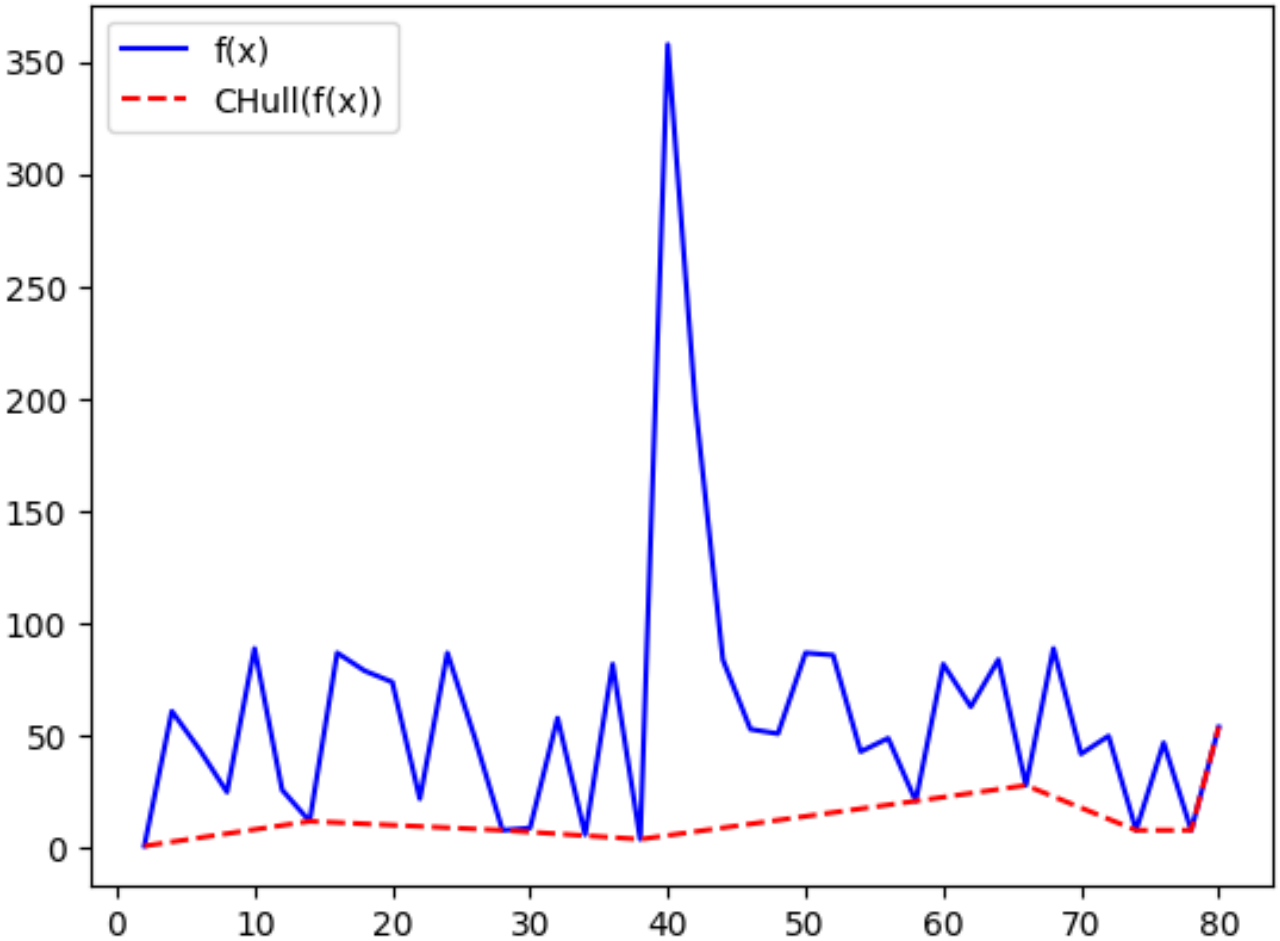
First test



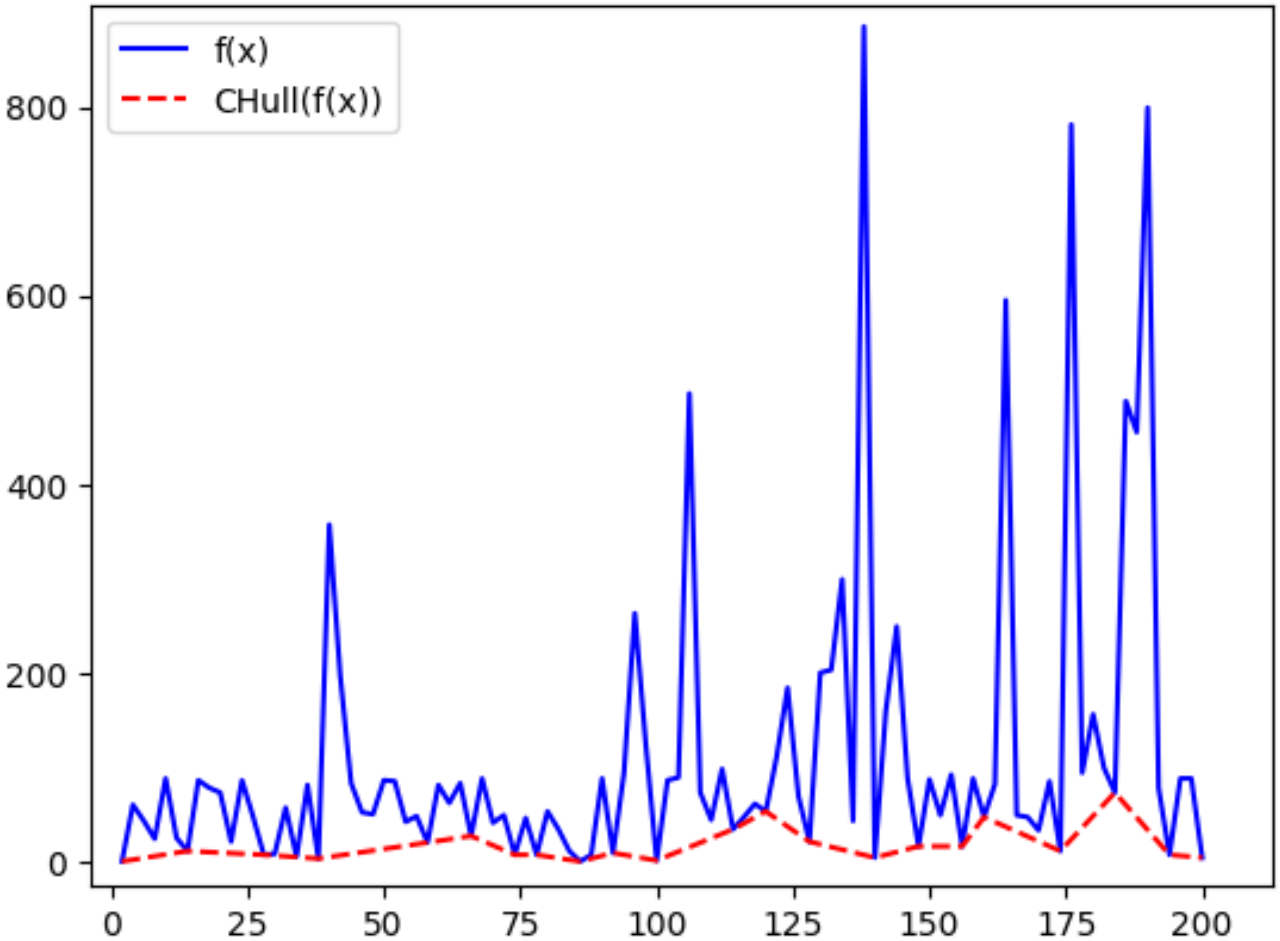
Slightly larger test



Test with 100 data points



Test with 200 data points



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- Solution? Try another algo!

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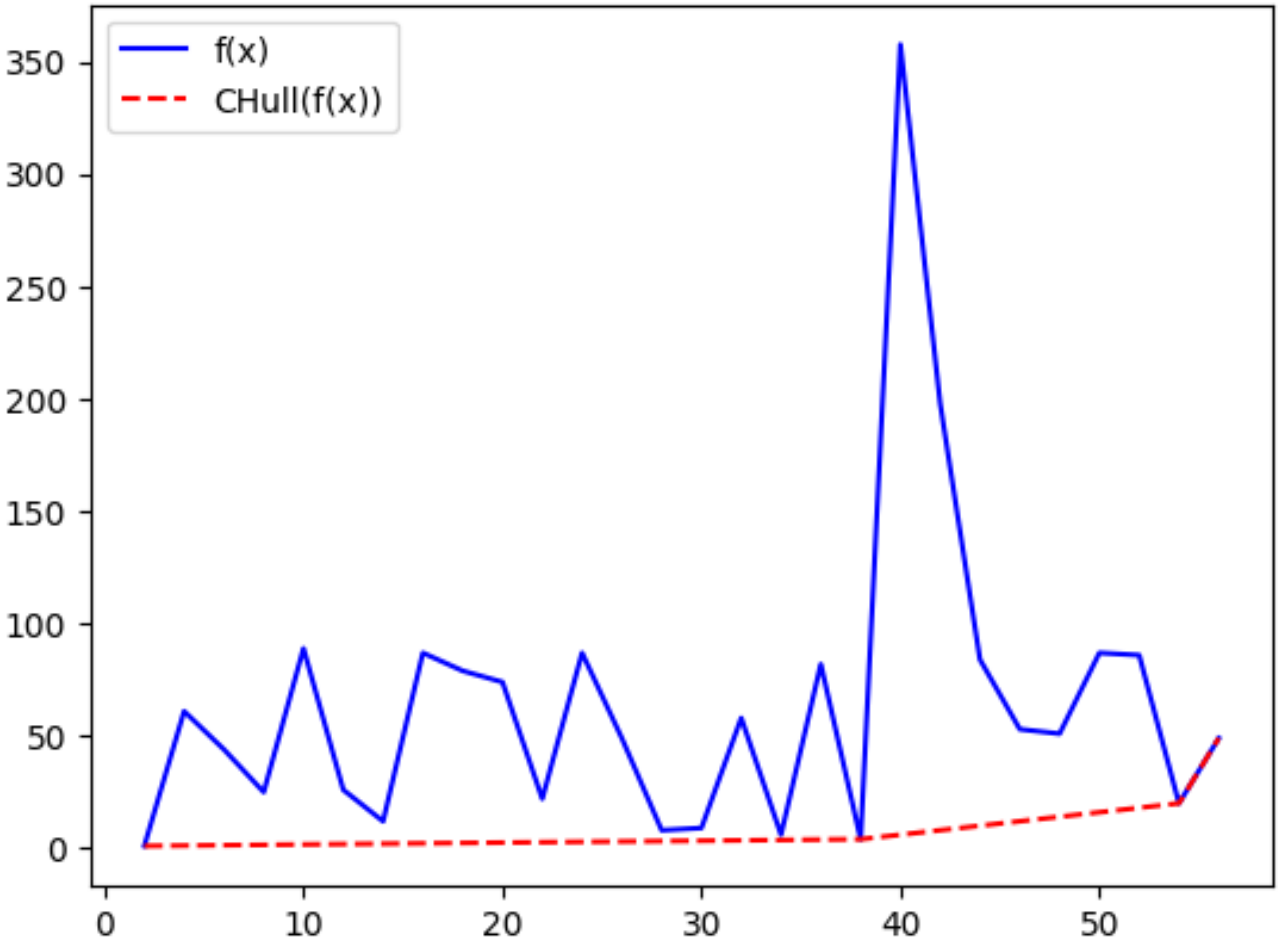
- Usually runs a sub-routine on upper and lower part of the set, we are only interested in the lower part however
- Only looking at one hull reduces to $\mathcal{O}(n)$ complexity


f(x)
CHull(f(x))
350
300
250
200
150
100
50
0
0
10
20
30
40
50

Any Questions?