

數值方法 Hw4. Least Square

tags: 數值方法 numerical 108-2

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用 Least Square 找出 n 次多項式 $P(x) \rightarrow f(x)$

分析， n 次多項式的最佳選擇為何？

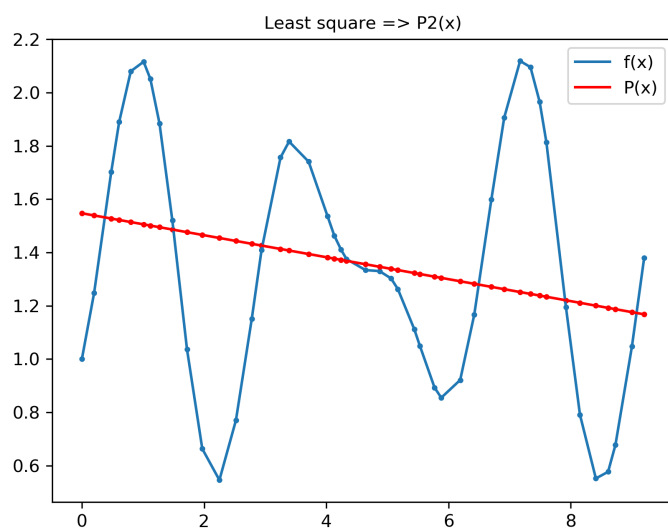
- 38

圖示說明

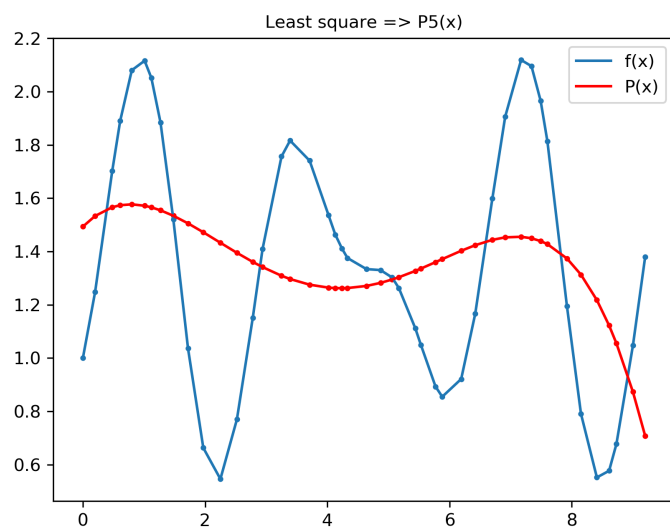
- 藍色部分為 $f(x)$
- 紅色部分為 $P_n(x)$

實驗結果

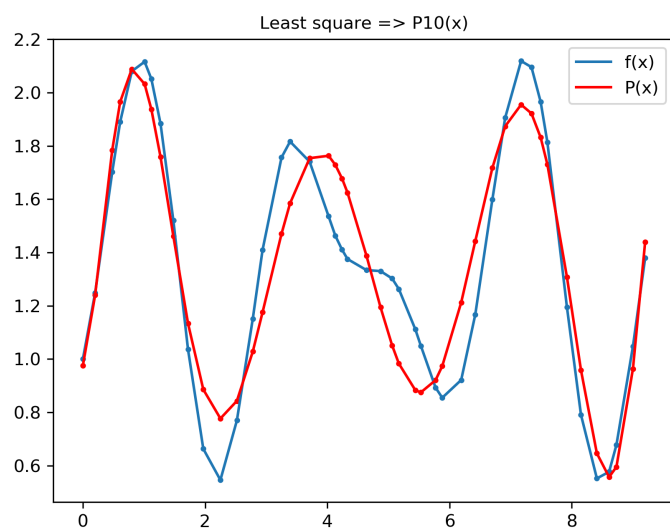
- 實驗區間 $n=2 \sim 45$
- $n=2$



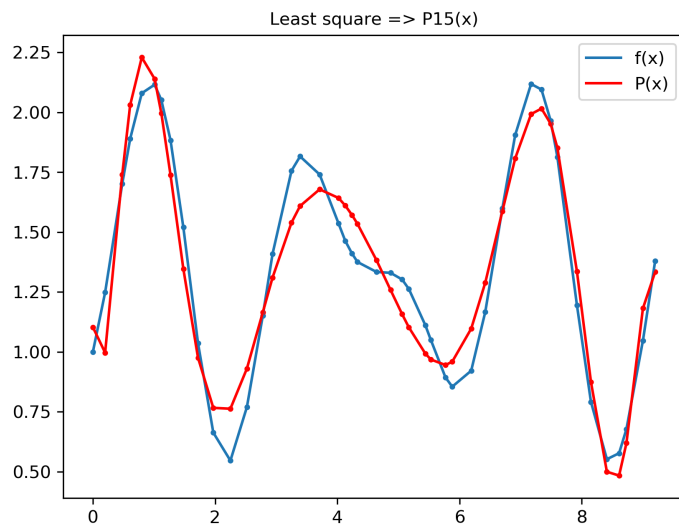
- $n=5$



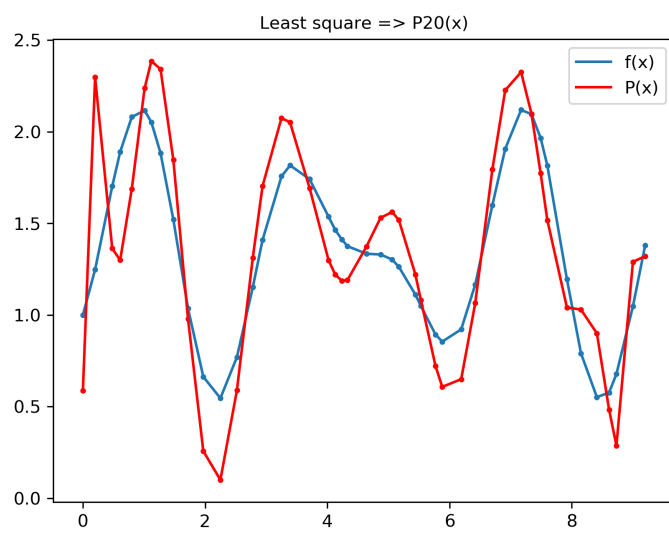
- $n=10$



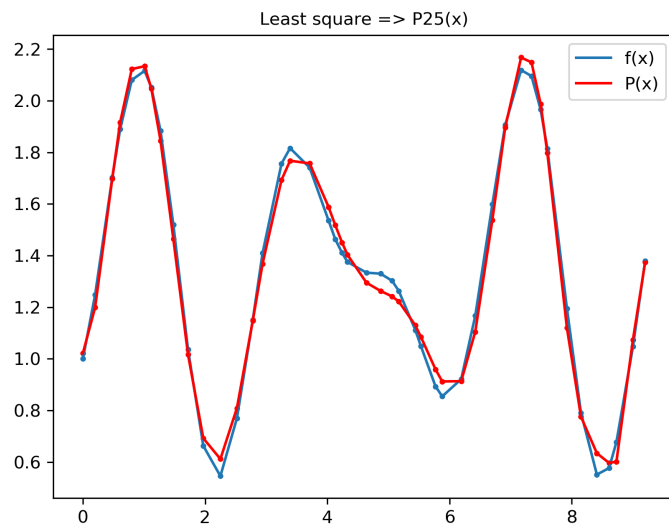
- $n=15$



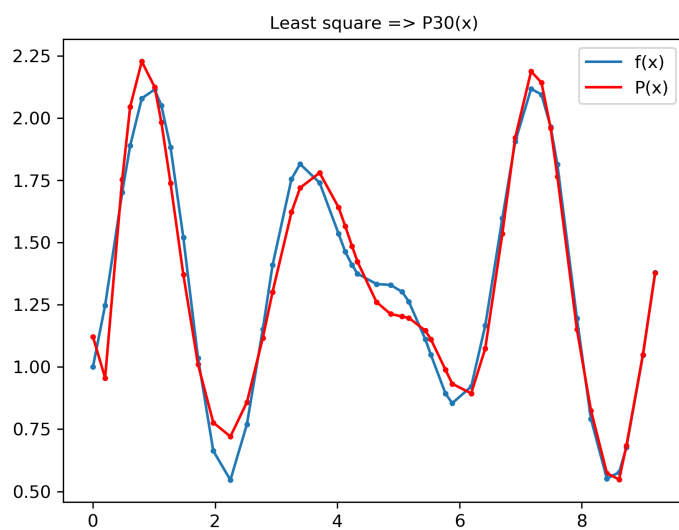
- $n=20$



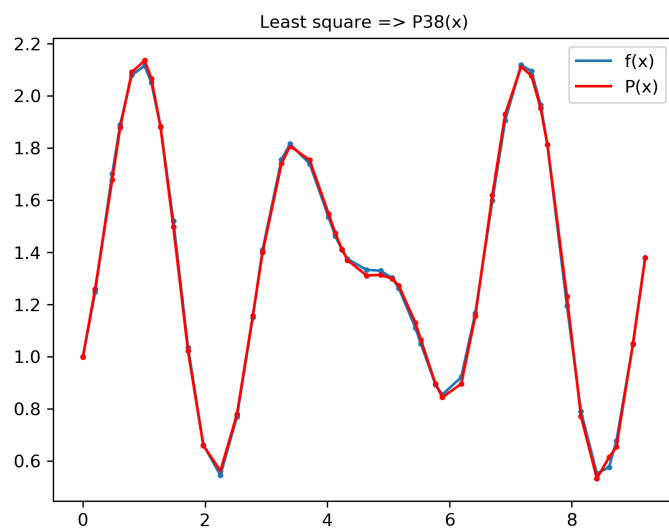
- $n=25$



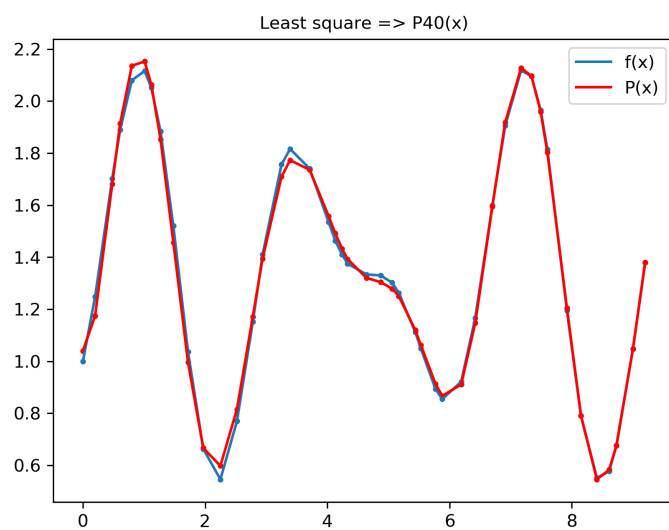
- $n=30$



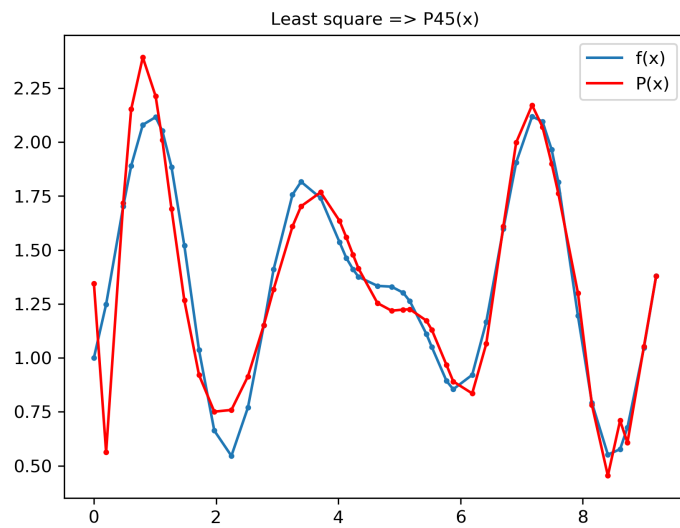
- $n=38$



- $n=40$



- $n=45$



Code

- <https://github.com/william31212/numerical/tree/master/HW4>
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