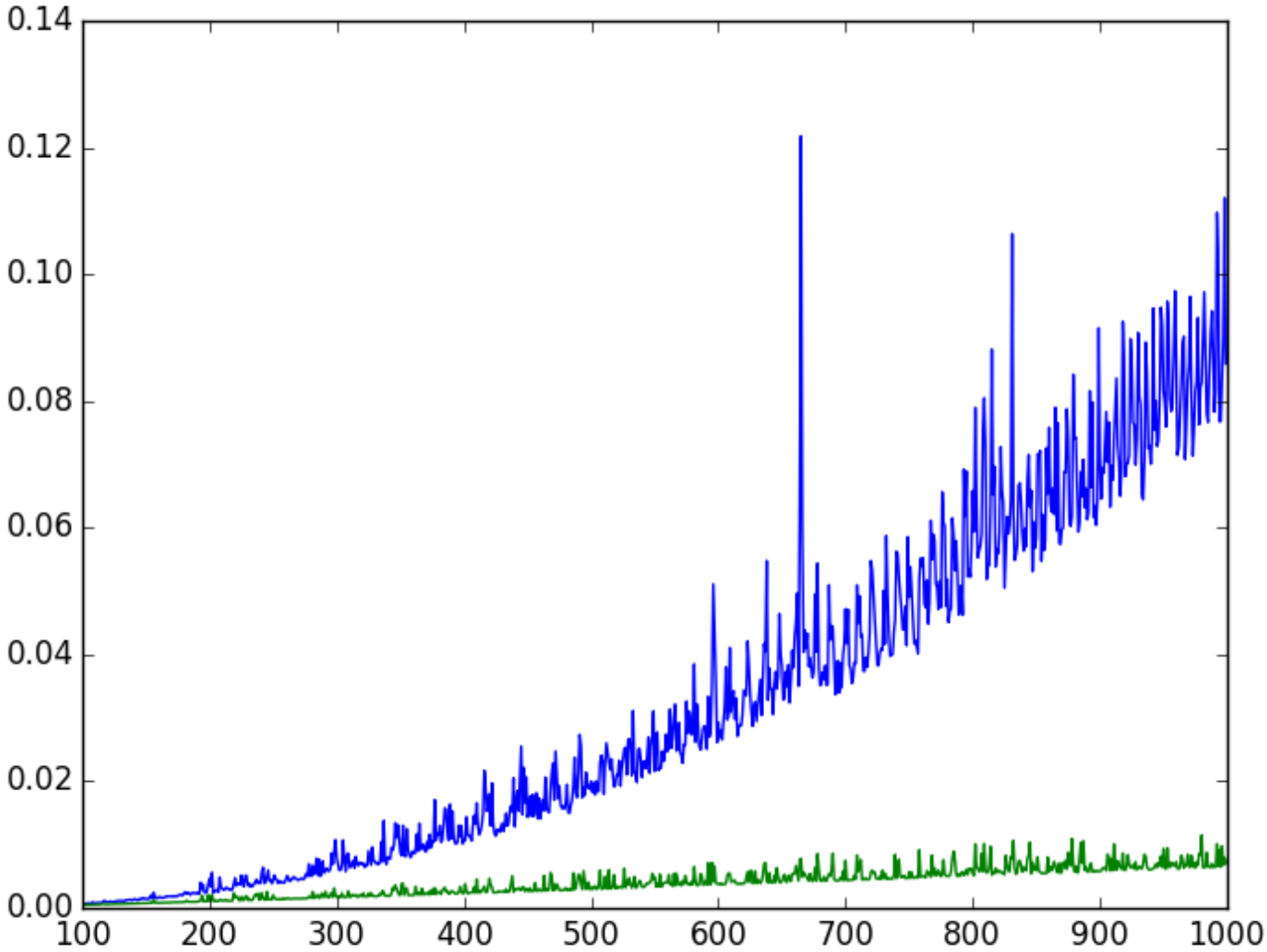
Lecture 30: Sorting

```
1  def insertionsort(L):
2      for i in range(len(L)):
3          for j in range(i-1,-1,-1):
4              if L[j+1] < L[j]:
5                  L[j], L[j+1] = L[j+1], L[j]
6              else:
7                  break
8      return L
```

Data Time versus Time

Running time (y-axis) of MergeSort (green) and InsertionSort (blue) on random data of size $100 \leq n \leq 1000$ (x-axis) and $100 \leq 10000$ by 100 (x-axis).



Data Time versus Time

Running time (y-axis) of MergeSort (green) and InsertionSort (blue) on random data of size $100 \leq 10000$ by 100 (x-axis).