

# Simon\_1930026144\_AssI

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```
[5]: import numpy as np
import time
print("Simon H. YANG, 1930026144")
```

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```
[6]: a = np.random.rand(100000)
b = np.random.rand(100000)
```

```
[7]: # vectorized
tic = time.time()
c = np.dot(a, b)
toc = time.time()
print(c)
print("vectorized version " + str(1000*(toc-tic)) + "ms")
```

24893.08730018982

vectorized version 5952.954292297363ms

```
[9]: # non-vectorized
c = 0
tic = time.time()
for i in range(100000):
    c += a[i] * b[i]
toc = time.time()
print(c)
print("non-vector version " + str(1000 * (toc-tic)) + "ms")
```

24893.08730018943

non-vector version 46.90814018249512ms

```
[ ]:
```