

Regression

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```
[2]: import torch
import numpy as np
import pandas as pd
import matplotlib.pyplot as plt
import math
import time
from d2l import torch as d2l

np.random.seed(42)
torch.manual_seed(42)
```

```
[2]: <torch._C.Generator at 0x75b5ad14a270>
```

0.1 The importance of Vectorization

```
[3]: n = 10000
a = torch.ones(n)
b = torch.ones(n)
```

```
[4]: c = torch.zeros(n)
t0 = time.time()
for i in range(n):
    c[i] = a[i] + b[i]
f"{time.time() - t0:.5f} sec"
```

```
[4]: '0.11545 sec'
```

```
[ ]: t0 = time.time()
c = a + b
f"{time.time() - t0:.5f} sec"
```

```
[ ]: '0.00032 sec'
```

```
[ ]:
```