

# Data Representation

JSON and the alternatives

# JSON

## The good

- Data is represented exactly as it is in our code,  
ie. Lists and Dictionaries
- Can be converted to and from a string without any loss of  
degradation of data.

# JSON    The bad

- Very verbose. Not particularly efficient.
- Does not scale to “Big Data”.

# Our imaginary shop

```
# Name
# Number of times visited shop
# Number of items bought
# Total amount of money spent

# Alice, 24, 12, 300
# Bob, 10, 10, 650
```

```
import json
converted = json.dumps(data)
print(21 / len(converted)) # 0.152 = 15.2%
```

```
[
  {
    "name": "Alice",
    "visited": 24,
    "items_bought": 12,
    "spent": 300.0
  },
  {
    "name": "Bob",
    "visited": 10,
    "items_bought": 10,
    "spent": 650.0
  }
]
```

$f_x$  |

	A	B	C	D	
1	name	visited	items_bought	spent	
2	Alice	24	12	300.00	
3	Bob	10	10	650.00	
4					
5					
6					