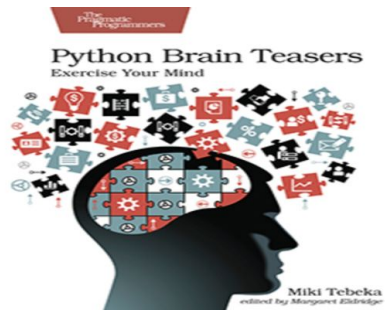
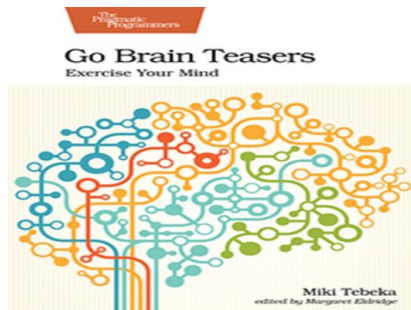


JSON

the fine print

miki @tebeka

CEO, CTO, UFO ...



Serialization



In computing, **serialization** ... is the process of **translating a data structure or object state into a format that can be stored ... or transmitted ... and reconstructed later** (possibly in a **different computer environment**).



Microsoft edge Logo Icon by [Pixel Icons](#) on [IconScout](#)

Serialization Formats

- JSON
- XML
- CSV
- YAML
- TOML
- ...
- MessagePack
- Protobuf
- Flat buffers
- Cap'n Proto
- BSON
- ...



https://en.wikipedia.org/wiki/The_Treachery_of_Images

From	To	Medium	Use
Python	JSON	bytes	dumps
JSON	Python	bytes	loads
Python	JSON	File like	dump
JSON	Python	File like	load

JSON	Python
null	None
true/false	True/False
number	int/float
string	str
array	list
object	dict

tuple

```
loc = (32.071517, 34.8445123)
data = json.dumps(loc)
loc2 = json.loads(data)
print(loc == loc2)    # False
```

tuple

```
print(loc)  
# (32.071517, 34.8445123)  
print(loc2)  
# [32.071517, 34.8445123]
```

tuple

```
population[loc2] += 1
```

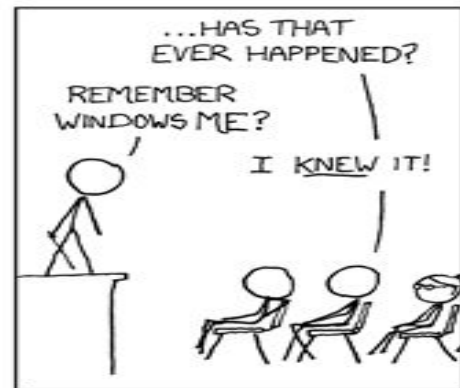
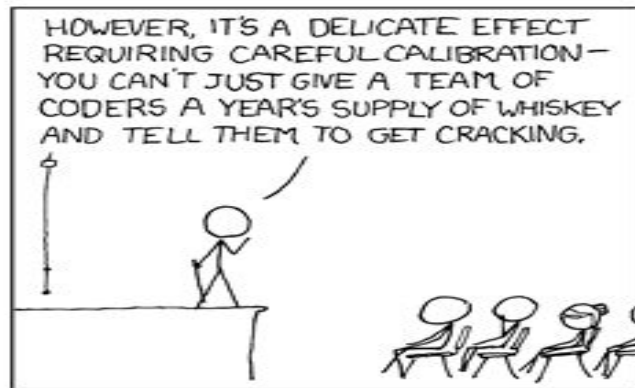
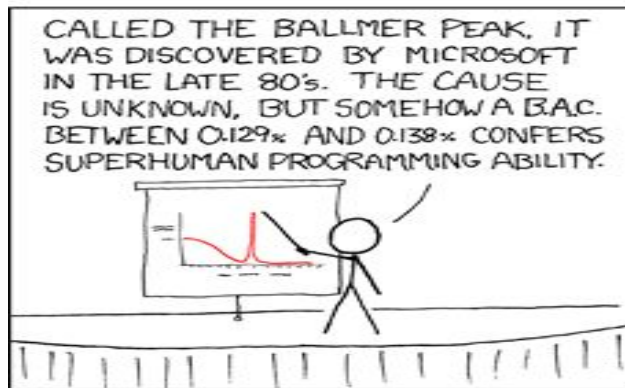
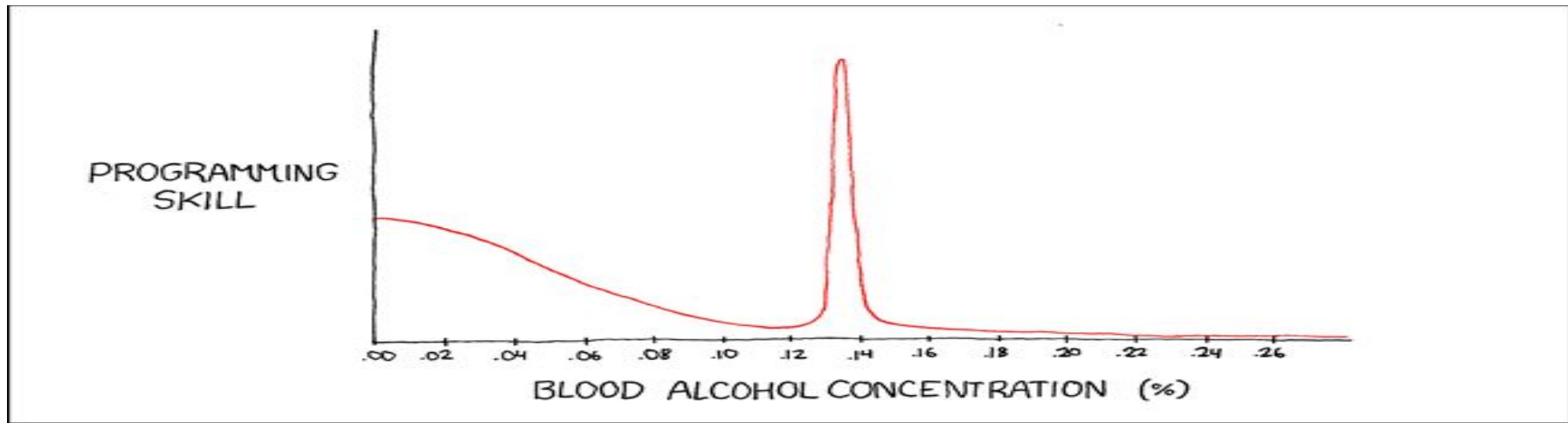
```
...
```

```
TypeError: unhashable type: 'list'
```

MIA

- datetime
- bytes (binary data)
- set
- ...

Talk is Cheap
**Show me the
Code**



<https://xkcd.com/323/>

Closing Words

- Serializes at program “edges”
- Use hooks for custom serialization
- Valid JSON << Valid data
- You can do streaming
- Don't tie internal objects to API

Thank You

[@tebeka](#)

