JSON

the fine print

miki @tebeka

CEO, CTO, UFO ...

353

Go Brain Teasers
Exercise Your Mind
Miki Tebeka
edited by Margaret Eldridge

Python Brain Teasers
Exercise Your Mind
Miki Tebeka
edited by Margaret Eldridge

Pandas Brain Teasers
Exercise Your Mind
Miki Tebeka
edited by Margaret Eldridge
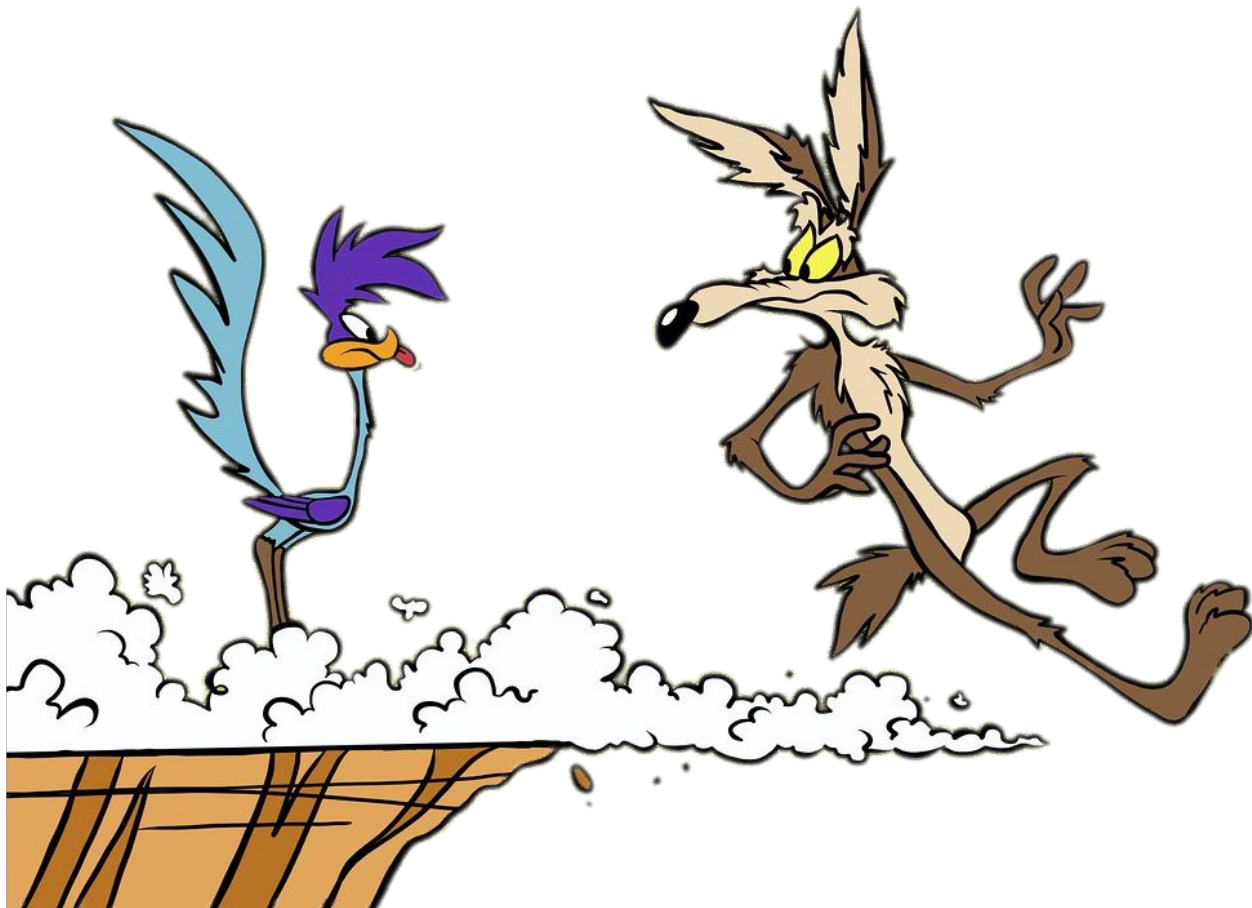
in Learning
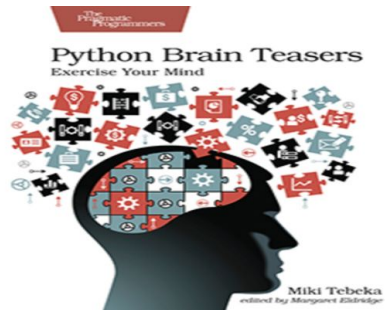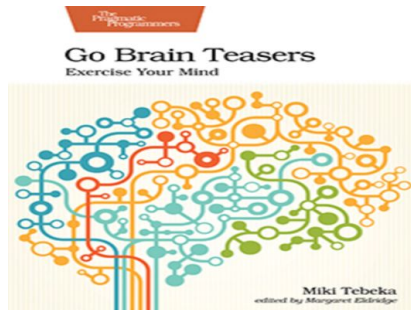
Serialization

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**).

Image by Netali Goren

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'
```
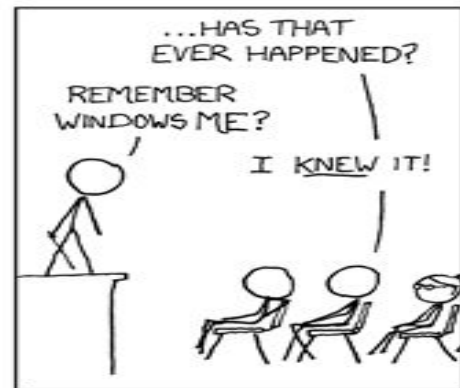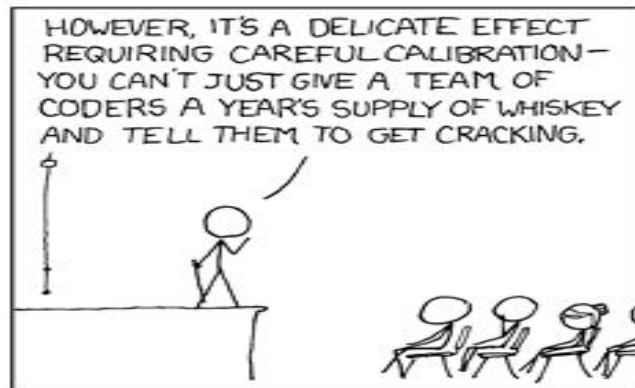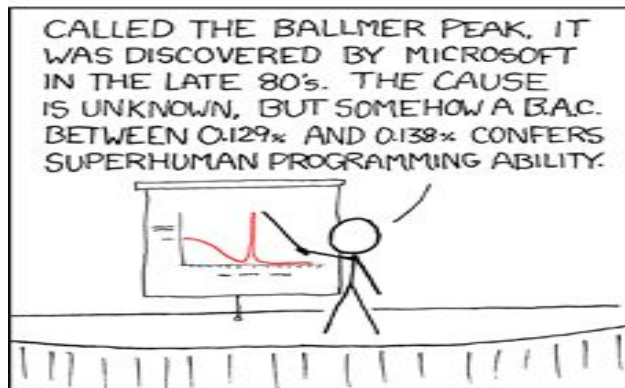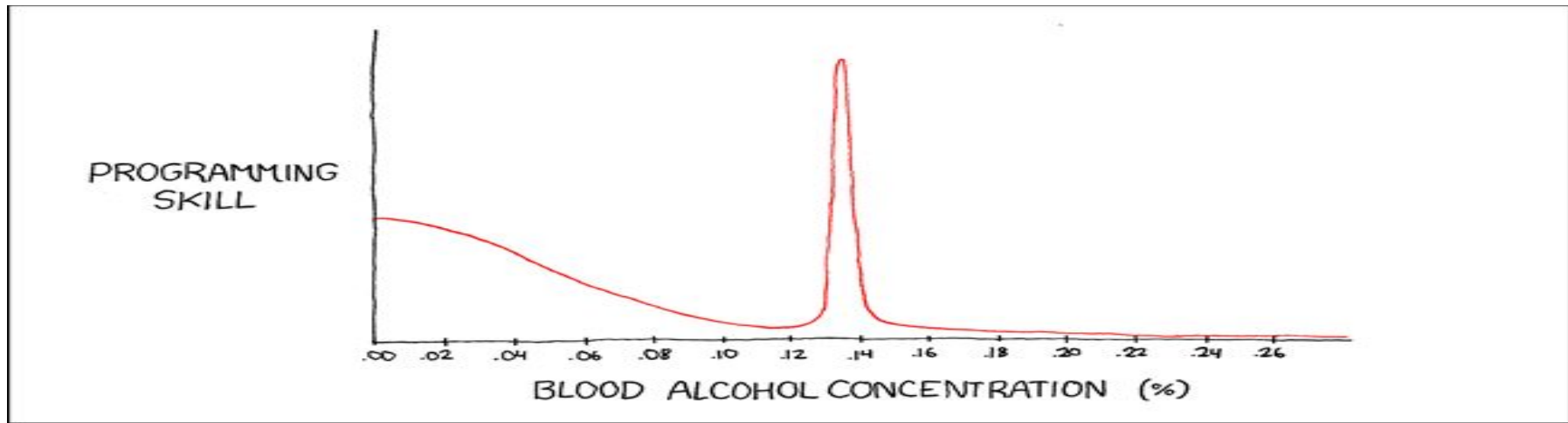
JSONEncoder

If allow_nan is true (the default), then NaN, Infinity, and -Infinity will be encoded as such. **This behavior is not JSON specification compliant,** but is consistent with most JavaScript based encoders and decoders.

MIA

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

Talk is Cheap
Show me the Code

https://xkcd.com/323/

Closing Words

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

Thank You

@tebeka