TO IMPROVE YOUR PYTHON, LEARN RUST

a very promising partnership

RUST?

YOU MIGHT BE ALREADY USING IT!

ruff: black but faster

Pydantic 2.0: Pydantic but faster

polars: Pandas but faster

tiktoken: tokenizer for OpenAI models

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COMPLEMENTARY SKILLSET

two languages that complement each other

Python		Rust
Fast to develop	<->	Fast to run
Flexible	<->	Robust
Large ecosystem	<->	Small artefacts

GETTING STARTED

generate a project skeleton with maturin

```
$ maturin new --mixed --bindings pyo3 something
```



```
$ tree something
something
Cargo.toml
pyproject.toml
python
something
init_.py
src
lib.rs
```

RUST VIEW

```
use pyo3::prelude::*;

#[pyfunction]
fn sum_as_string(a: usize, b: usize) -> PyResult<String> {
    Ok((a + b).to_string())
}

#[pymodule]
fn something(_py: Python, m: &PyModule) -> PyResult<()> {
    m.add_function(wrap_pyfunction!(sum_as_string, m)?)?;
    Ok(())
}
```

PYTHON VIEW

```
from something import sum_as_string
print(sum_as_string(2, 2))
# 4
```

NOW DO SOMETHING MORE COMPLEX 💅

Performance-sensitive task...

Concurrent tasks...

Memory pressured tasks...

Systems programming...

Image processing...



LEARN GOOD PRACTICES FROM RUST

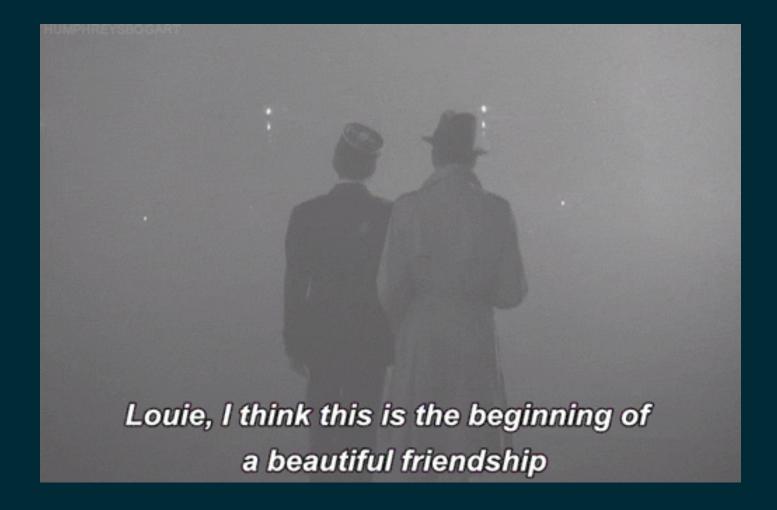
Make documentation a first class feature

Put more thought into error handling

User iterators & generators; pattern matching

Prefer immutable variables

... [your insights here] ...



maturin.rs