ROS 2 : Type Checked Python

Static Typing in the Test Toolchain

Ted Kern - Ubuntu Robotics

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Type Hints

```
def screw_lerp(pose_start: np.ndarray,
               pose_end: np.ndarray,
               duration: float)
               -> DualQuaternion:


def add_STRIPS(self, key: str,
               effect: Dict[str,bool]]):
```
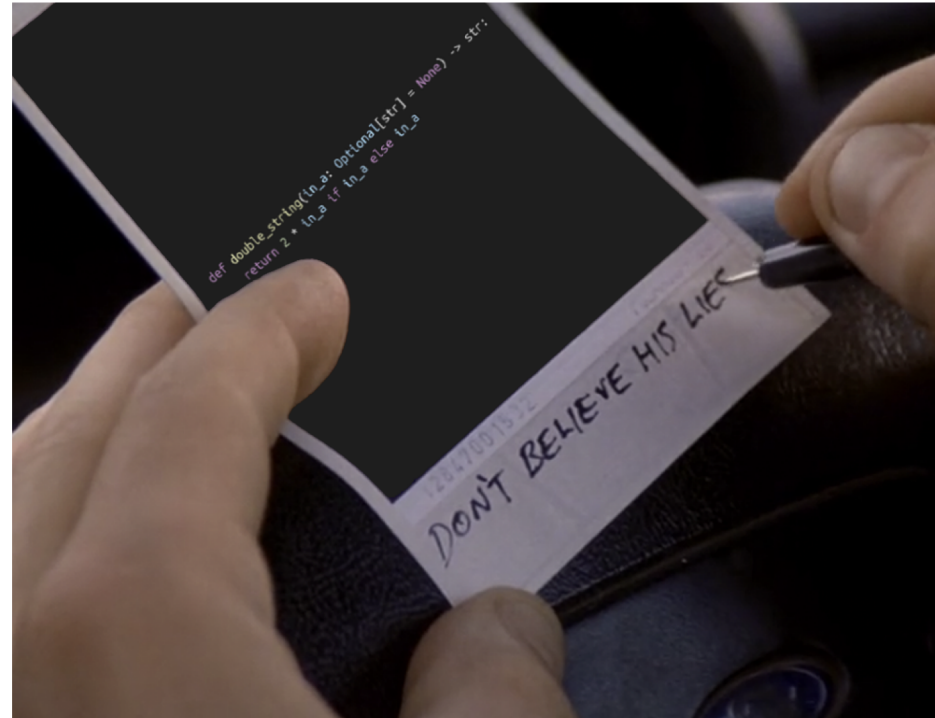
Why?

- **Documentation**
- **Readability**
- **Validation**

The Problem

- **Completely optional tool**

- **Must manually run mypy**

- **Mistakes/typos can mean the code lies**

ament_lint

- **Integrated code analyzers ("linters")**

- **Check style, syntax, etc**

- **Part of CI/CD testing pipeline**
  - **Automate with `<test_depend>`**
  - **Can run locally with `colcon test`**

Using ament_mypy

- **Package.xml**
  - `<test_depend>ament_mypy</test_depend>`

- **Test case**
  - `assert ament_mypy.main.main() == 0`

- **CMake (optional)**
  - Can be handled by `ament_lint_auto`

ご質問は
展示場内**Ubuntu**ブース
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まで

https://blog.ubuntu.com/topic/robotics

- **Ubuntu Robotics Blog**
  - **Spearheading ROS 2 Security**
  - **News and ROS 2 updates**
  - **Guides on**
    - **Snap packaging**
    - **Using ROS 2**
    - **Writing ament linters**
    - **Expanding the ROS 2 CLI**
    - **… and more**

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