



# Best practices: Unit Testing

Michael Eyler

# Presentation Path

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- Why use it?
- #Define Unit\_Testing
- Python examples
- C++ example
- Discussion

# Why should I unit test?

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- Test driven development
  - Simplest code possible
  - Self-documenting
  - Easier to debug

# #Define Unit\_testing

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- #ifndef
  - Unit testing involves testing small “units” of code to ensure they function properly.
- #endif

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- #endif
- Dice example.



# Python unit testing

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- unittest
  - <https://docs.python.org/3/library/unittest.html#unittest.TestCase>
- walk-through

# Python unit testing

- unittest

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- <https://docs.python.org/3/library/unittest.html#unittest.TestCase>

- walk-through

- Pros:

- It's in the standard lib
- Faster than Pytest

- Cons:

- Not as much information

# Python unit testing

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- pytest
  - <https://docs.pytest.org/en/latest/>
  - Walk through



# Python unit testing

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- pytest
  - <https://docs.pytest.org/en/latest/>
  - Walk through
- Pros:
  - Simpler test statements
  - More information given than unittest
- Cons:
  - Not included in the standard library
  - Documentation is not as easy to navigate

# C++ unit testing

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- Gtest
  - <https://github.com/google/googletest/tree/master/googletest>
  - <https://www.eriksmistad.no/getting-started-with-google-test-on-ubuntu/>
  - Walk through

# C++ unit testing

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- Gtest
  - <https://github.com/google/googletest/tree/master/googletest>
  - <https://www.eriksmistad.no/getting-started-with-google-test-on-ubuntu/>
  - Walk through
- Pros:
  - It's Google.
- Cons:
  - It's Google.

# Wrapping up

# Write tests. Save Lives.



**Brenan Keller**  
@brenankeller



A QA engineer walks into a bar. Orders a beer. Orders 0 beers. Orders 999999999999 beers. Orders a lizard. Orders -1 beers. Orders a ueicbksjdhd.

First real customer walks in and asks where the bathroom is. The bar bursts into flames, killing everyone.

2:21 PM · Nov 30, 2018 · [Twitter for iPhone](#)



# Discussion