

# The Cargo Cult of The South Seas (Abridged!)

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2018/04/05



[https://en.wikipedia.org/wiki/History\\_of\\_Oceania#/media/File:NZ\\_3rd\\_Division\\_\(USMC\\_photo\).jpg](https://en.wikipedia.org/wiki/History_of_Oceania#/media/File:NZ_3rd_Division_(USMC_photo).jpg)





# Examples

# Cargo Cult Programming



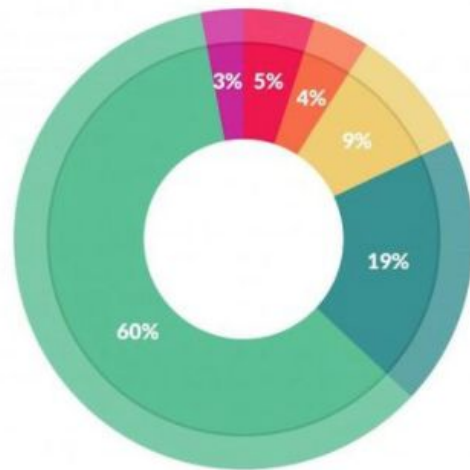
# *Cargo Cult Project Management*



<http://dilbert.com/strip/2011-03-11>

# Cargo Cult Science

***Data preparation*** accounts for about 80% of the work of data scientists



What data scientists spend the most time doing

- Building training sets: 3%
- Cleaning and organizing data: 60%
- Collecting data sets: 19%
- Mining data for patterns: 9%
- Refining algorithms: 4%
- Other: 5%

<https://www.forbes.com/sites/gilpress/2016/03/23/data-preparation-most-time-consuming-least-enjoyable-data-science-task-survey-says/#39ad7c8b6f63>



# *Cargo Cult Science*

The Apparent

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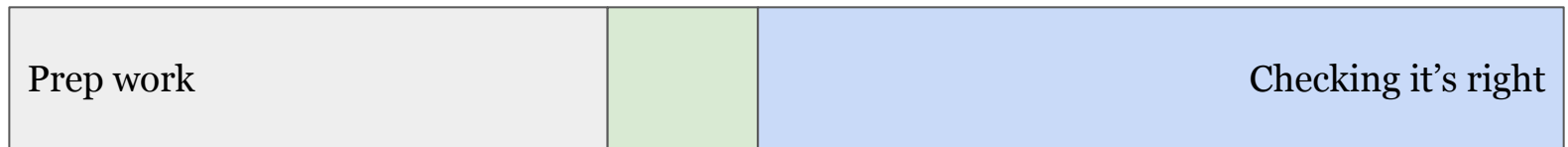


Getting the answer

# *Science*

The Apparent

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Getting an answer

# *Science*



*The first principle is that you must not fool yourself—and you are the easiest person to fool.*

*So you have to be very careful about that.*

*After you've not fooled yourself, it's easy not to fool other scientists. You just have to be honest in a conventional way after that.*

*Richard P. Feynman (1974)*

## Summary

1. Science is a systematic method to avoid fooling ourselves that has been developed over thousands of years. To benefit from the method you must understand how it works, beyond specific tools used by scientists.
2. Good science tests models of reality. Make sure you know what your model is, and what you expect to happen if it's true or not.



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