
Data Science: hurricane rapid intensification

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Abstract

The modelling of storms is a fascinating problem that is usually attacked by atmospheric scientists or mathematicians using tools from applied mathematics.

This project is about an exciting alternative: modern data science. I have a dataset looking at Atlantic storms from 1979 to 2015. Many variables are measured. As far as I know, no one has looked at the dataset from a statistical point of view... yet.

1 Rough project outline

- Week 1: Choose projects.
- Weeks 2-4: Exploratory Data Analysis: correlate hurricanes to other predictors. Produce plots of storms strength over time, and study the influence of moisture and other predictors.
- Weeks 5-6: Attempt to predict storm strength using other predictors.
- Weeks 7-8: Attempt to predict presence/absence of hurricanes using other predictors.
- Weeks 9-12: Write final report for Part A. Begin work for part B by studying *rapid intensification*.

2 Skills required

Data analysis, statistical modelling and fitting in R. Enthusiasm for exploring unusual data!