# Data Science Books

Meetup #3 Data Science Campinas
Ivan Marin

### Areas

- Statistical Learning/Machine Learning
- Time Series
- Pattern Recognition
- Statistics

### Statistical Learning

#### An Introduction to Statistical Learning,

Gareth James, Daniela Witten, Trevor Hastie and Robert Tibshirani (University of Southern California)

#### http://www-bcf.usc.edu/~gareth/ISL/

- Free!
- Introductory
- Uses R for examples
- 2015 (6th edition)
- Good for: introduction to statistical models and machine learning

### Statistical Learning

#### **Elements of Statistical Learning**,

Trevor Hastie, Robert Tibshirani, Jerome Friedman (University of Southern California)

#### https://web.stanford.edu/~hastie/ElemStatLearn/

- Free!
- Medium/Advanced
- Uses R for examples
- 2009 (12th edition)
- Good for: in depth statistical basis of machine learning

# Machine Learning

Machine Learning,

Kevin Murphy (Research Scientist at Google)

https://mitpress.mit.edu/books/machine-learning-0

- Expensive
- Probabilistic/Bayesian
- Covers a lot: Advanced
- 2012
- Good for: everything and the kitchen sink

### Pattern Recognition

Pattern Recognition and Machine Learning,

Christopher Bishop (Microsoft Research)

http://www.springer.com/us/book/9780387310732

- Expensive (but there are ways...)
- Includes pattern recognition view in machine learning
- Medium/Advanced
- 2006
- Good for: overview and textbook, including Deep Learning

### Time Series

Forecasting: principles and practice

Rob J Hyndman, George Athana-sopou-los (Monash University, Australia)

https://www.otexts.org/fpp

- Free!
- Includes EDA for Time series
- Introductory, uses R
- 2017
- Good for: Introduction on the subject

### **Statistics**

#### **Engineering Statistics,**

NIST (US Department of Commerce)

#### http://www.itl.nist.gov/div898/handbook/

- Free!
- EDA, measurements, distributions, methods, Statistical models
- Introductory/Medium
- 2012
- Good for: reference manual and that things you can never remember
- (n or n-1?)

# Deep Learning

CS231n: Convolutional Neural Networks for Visual Recognition

University of Stanford

http://cs231n.stanford.edu/

- Free!
- Not exactly a book, but lots of materials
- Introductory/Medium/High it's a long course
- 2017
- Good for: introduction with examples in Deep Learning

# Bonus: O'Reilly

#### O'Reilly books

- Lots and lots of areas
  - Including business
- Good books (Pandas, Spark)
- Bad books (you name it)
- Expensive (but ask your employer, you may have access!)

### Bonus: O'Reilly

Cutting corners to meet arbitrary management deadlines

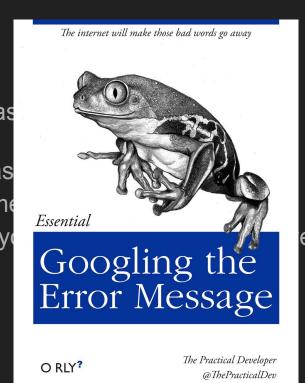


Copying and Pasting from Stack Overflow

O'REILLY\*

Essential

The Practical Developer @ThePracticalDev



Software can be chaotic, but we make it work Expert Trying Stuff Until it Works The Practical Developer O RLY? @ThePracticalDev