Where to go next?

AFM346 - PREDICTIVE ANALYTICS

JESÚS CALDERÓN

Machine Learning and Data Science

Topics

- Unsupervised Learning: dimensionality reduction, clustering, anomaly detection.
- Deep Learning and Neural Networks
- Text Analytics and NLP
- ML Ops and Engineering
- Visualization
- Statistics, Time Series Analysis.
- AI Ethics

References

- Wickham and Grolemund, R for Data Science
- Irizarry, Introduction to Data Science
- Casas, Data Science Live Book
- Silge and Robinson, Text Mining with R
- Khun and Johnson, Feature Engineering and Selection: A Practical Approach for Predictive Models
- Hyndman and Athanasopoulous, Forecasting: Principles and Practice
- Chollet and Allaire, Deep Learning with R
- Goodfellow, et al. Deep Learning

Programming

R programming

- Control structures (if-then, for/while loops, etc), functions, objects/classes
- Why? To automate tasks and create better abstractions
- Wickham, Advanced R
- Peng, R Programming for Data Science
- Gillespie and Lovelace, Efficient R programming
- Grolemund, Hands-On Programming with R

Other Programming Languages

- Python: Learn Python the Hard Way
- Libraries:
  - Pandas for data manipulation
  - Numpy for numerical methods
  - Matplotlib & Seaborn for visualization
  - Jupyter/Jupyter Lab
  - SciKit-Learn, PyTorch, Tensorflow

Visualization and Reproducible Documentation

- Edward Tufte's work
- Healy, Data Visualization
- Wilke, Fundamentals of Data Visualization
- Chang, R Graphics Cookbook
- Xie, bookdown: Authoring Books and Technical Documents with R Markdown
- Xie et al, blogdown: Creating Websites with R Markdown
- Fay et al, Engineering Production-Grade Shinny Apps

Data Sets and Publications

- UCI ML Repository
- Kaggle.com
- Data is Plural
- Tidy Tuesdays
- Papers with Code
- Google Data Search

Publications

- Towards Data Science, Data Science Central, Analytics Vidhya. Double check all materials from blogs.
- Arxiv
- AISC

Ethics

- General Business: Unethical Decision Making in Organizations
- DataResponsibility.github.io
  - Publications
  - Tools
  - Comics

Thank You!

Please stay in touch:

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