Machine Learning Concept Maps

Let's get this straight.
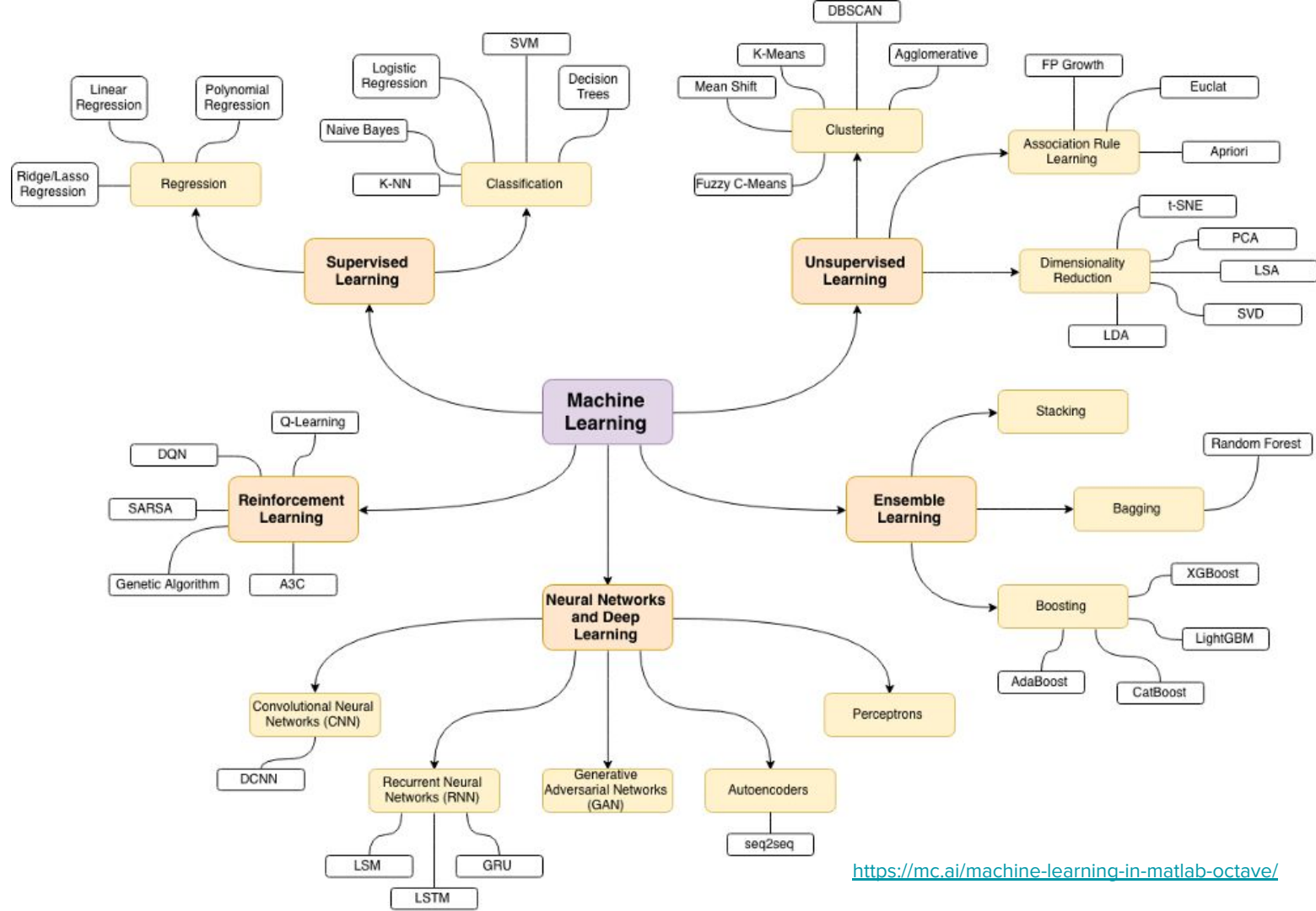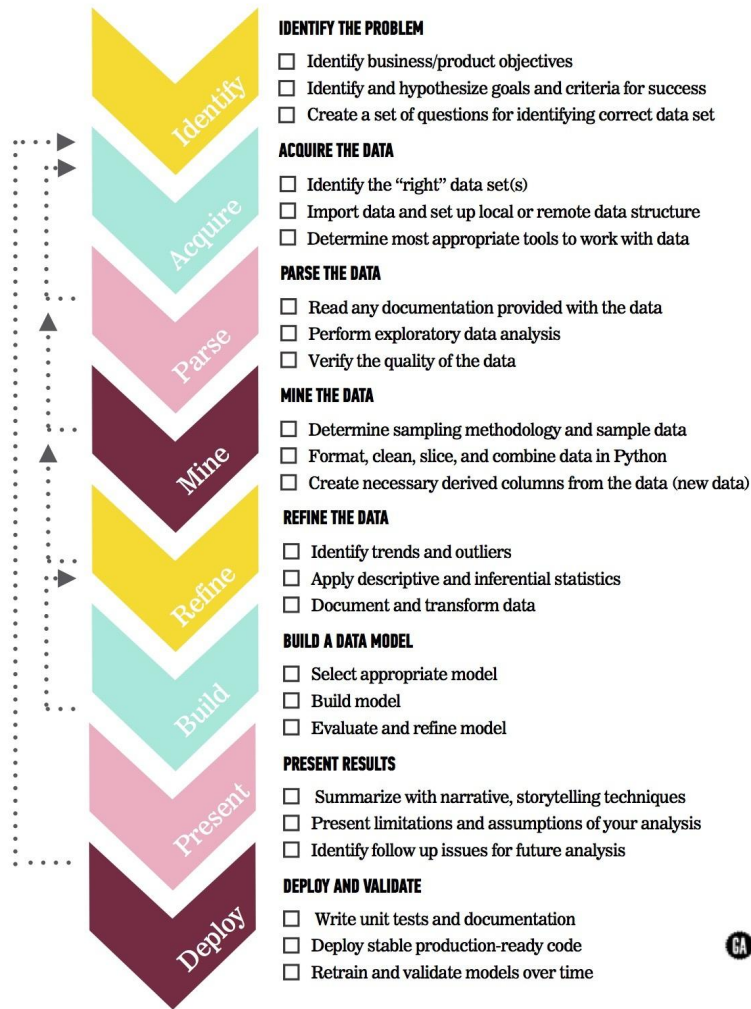
1. What models have we learned so far?

2. What categories do those models fall into?

3. What workflow do we follow?

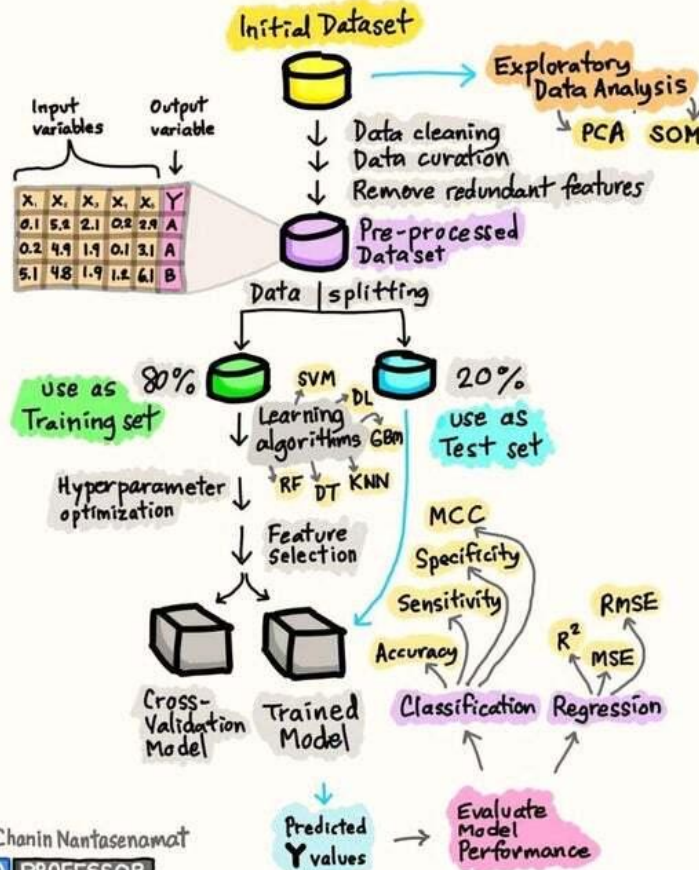4. What questions might help guide us through that workflow?

scikit-learn algorithm cheat-sheet

https://scikit-learn.org/stable/tutorial/machine_learning_map/

https://mc.ai/machine-learning-in-matlab-octave/

DATA SCIENCE WORKFLOW

IDENTIFY THE PROBLEM

- ☐ Identify business/product objectives
- ☐ Identify and hypothesize goals and criteria for success
- ☐ Create a set of questions for identifying correct data set

ACQUIRE THE DATA

- ☐ Identify the "right" data set(s)
- ☐ Import data and set up local or remote data structure
- ☐ Determine most appropriate tools to work with data

PARSE THE DATA

- ☐ Read any documentation provided with the data
- ☐ Perform exploratory data analysis
- ☐ Verify the quality of the data

MINE THE DATA

- ☐ Determine sampling methodology and sample data
- ☐ Format, clean, slice, and combine data in Python
- ☐ Create necessary derived columns from the data (new data)

REFINE THE DATA

- ☐ Identify trends and outliers
- ☐ Apply descriptive and inferential statistics
- ☐ Document and transform data

BUILD A DATA MODEL

- ☐ Select appropriate model
- ☐ Build model
- ☐ Evaluate and refine model

PRESENT RESULTS

- ☐ Summarize with narrative, storytelling techniques
- ☐ Present limitations and assumptions of your analysis
- ☐ Identify follow up issues for future analysis

DEPLOY AND VALIDATE

- ☐ Write unit tests and documentation
- ☐ Deploy stable production-ready code
- ☐ Retrain and validate models over time

Identify · Acquire · Parse · Mine · Refine · Build · Present · Deploy

https://bradzzz.gitbooks.io/ga-seattle-dsi/content/dsi/dsi_01_python/1.1-lesson/data-science-overview.html

BUILDING THE
MACHINE LEARNING
MODEL

By: Chanin Nantasenamat
DATA PROFESSOR
http://youtube.com/dataprofessor

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https://towardsdatascience.com/how-to-build-a-machine-learning-model-439ab8fb3fb1