Glimpse into Machine learning

Sugarkhuu Radnaa

Py4Econ in Ulaanbaatar

py4econ@gmail.com

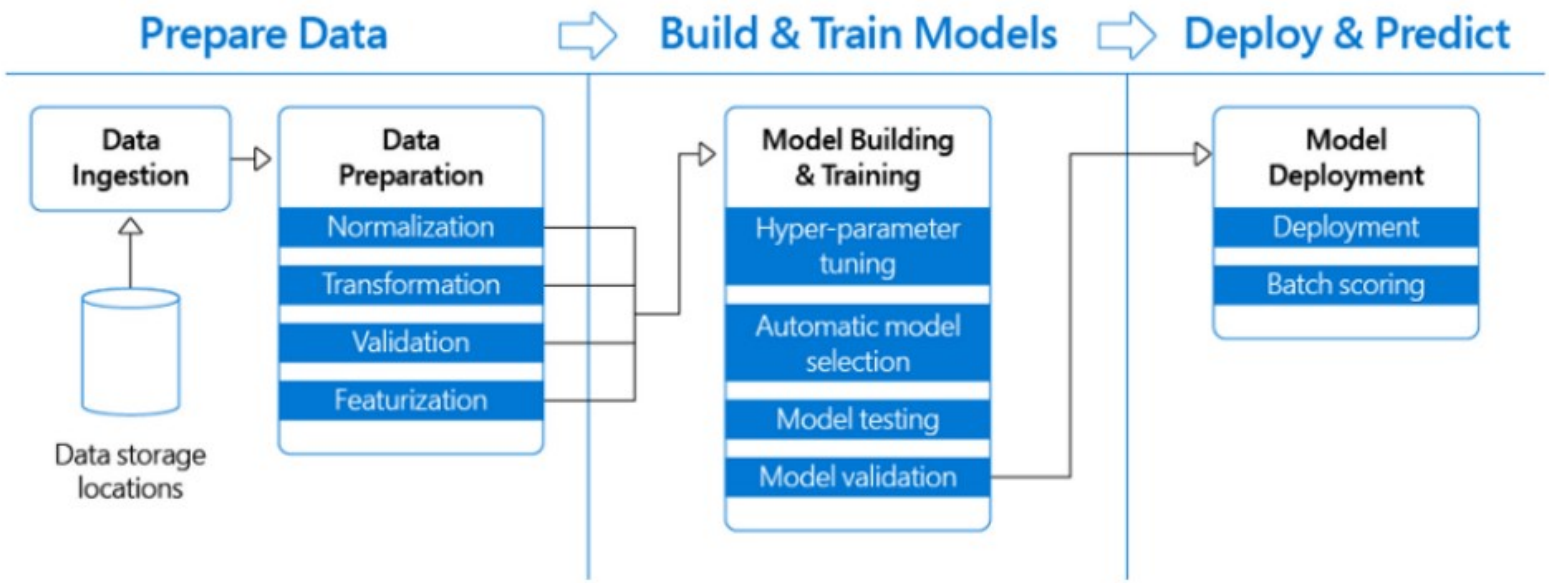
Week 8: Learning objectives

- Prerequisites for Machine learning
- Machine learning workflow
- Machine learning versus Deep learning|AI
- Different types of Machine learning algorithms
- Examples (OLS, Cross Validation/Model selectionXGBoost)

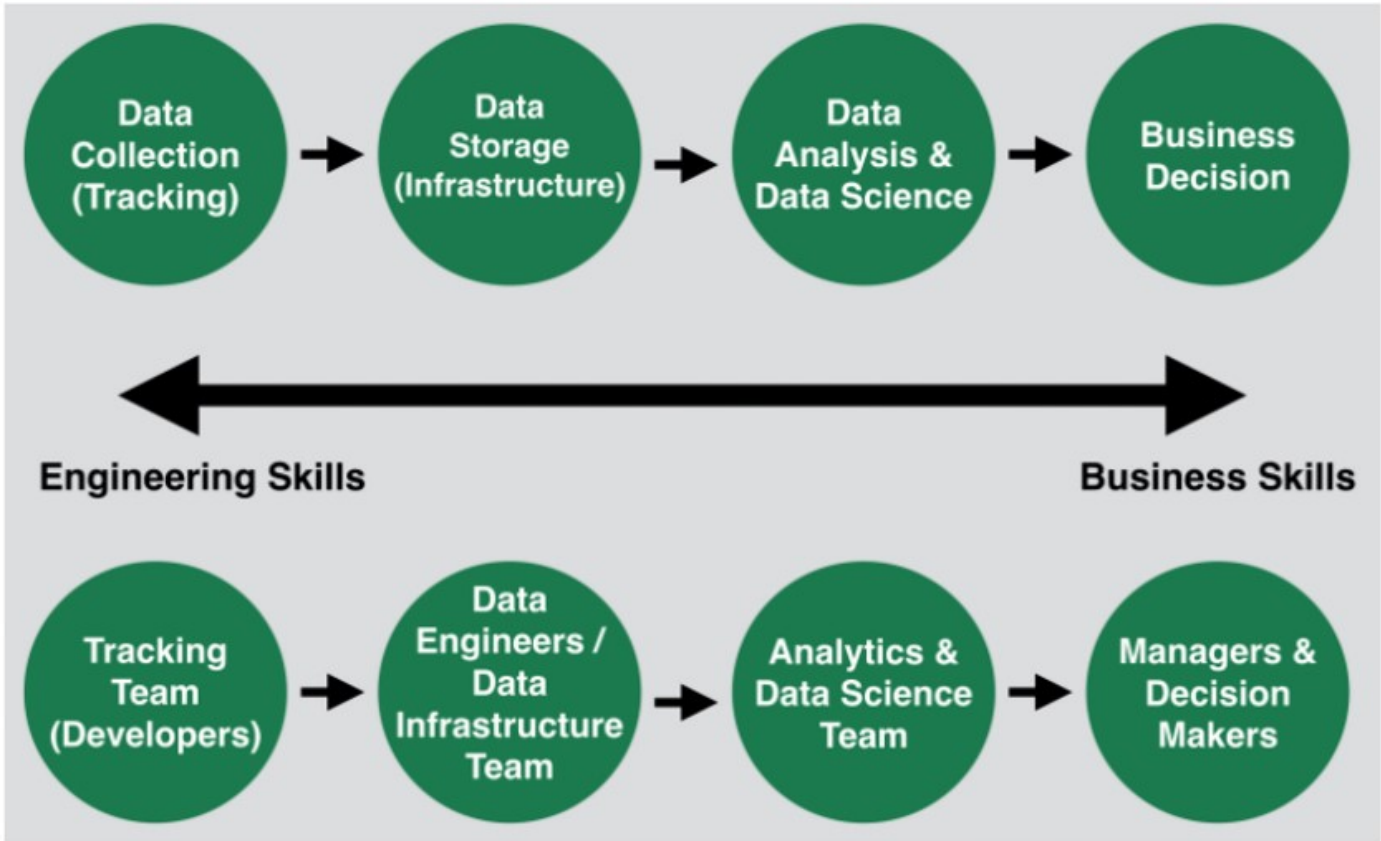
Prerequisites for Machine learning

- Algebra and linear algebra (Matrix)
- Probability and statistics
- Calculus (derivaties)
- Programming language (Python, R, C++, Matlab)
- Terminal (shell)

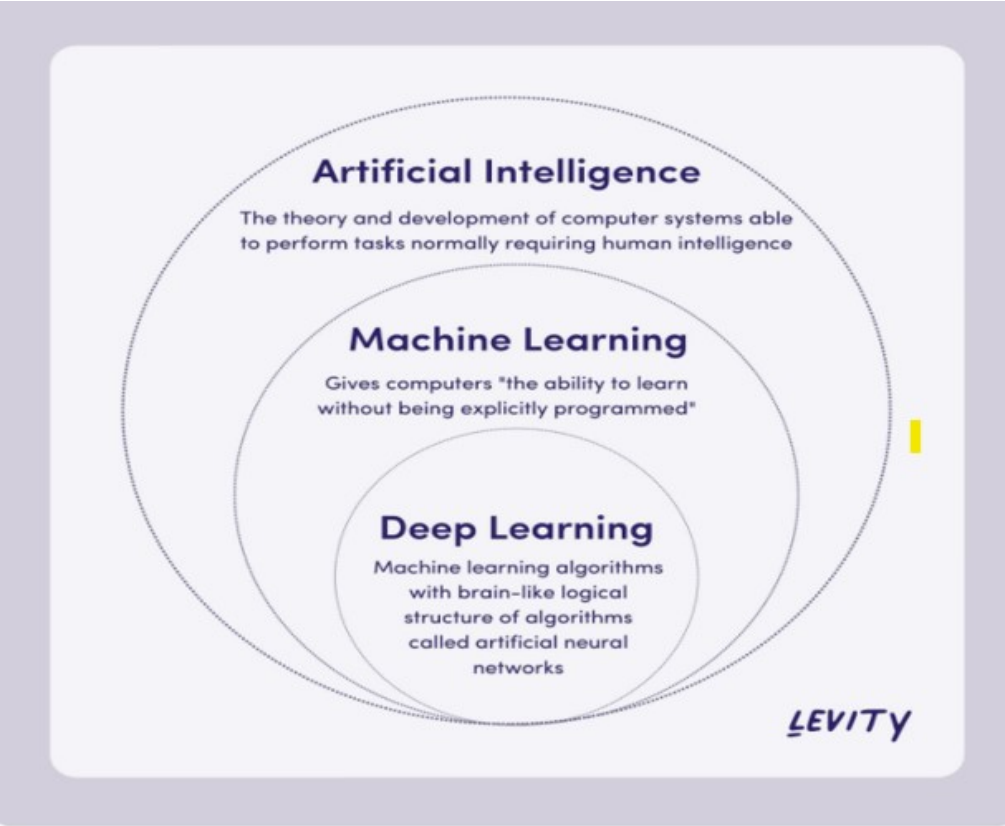
Machine learning pipeline 1



Machine learning pipeline 2

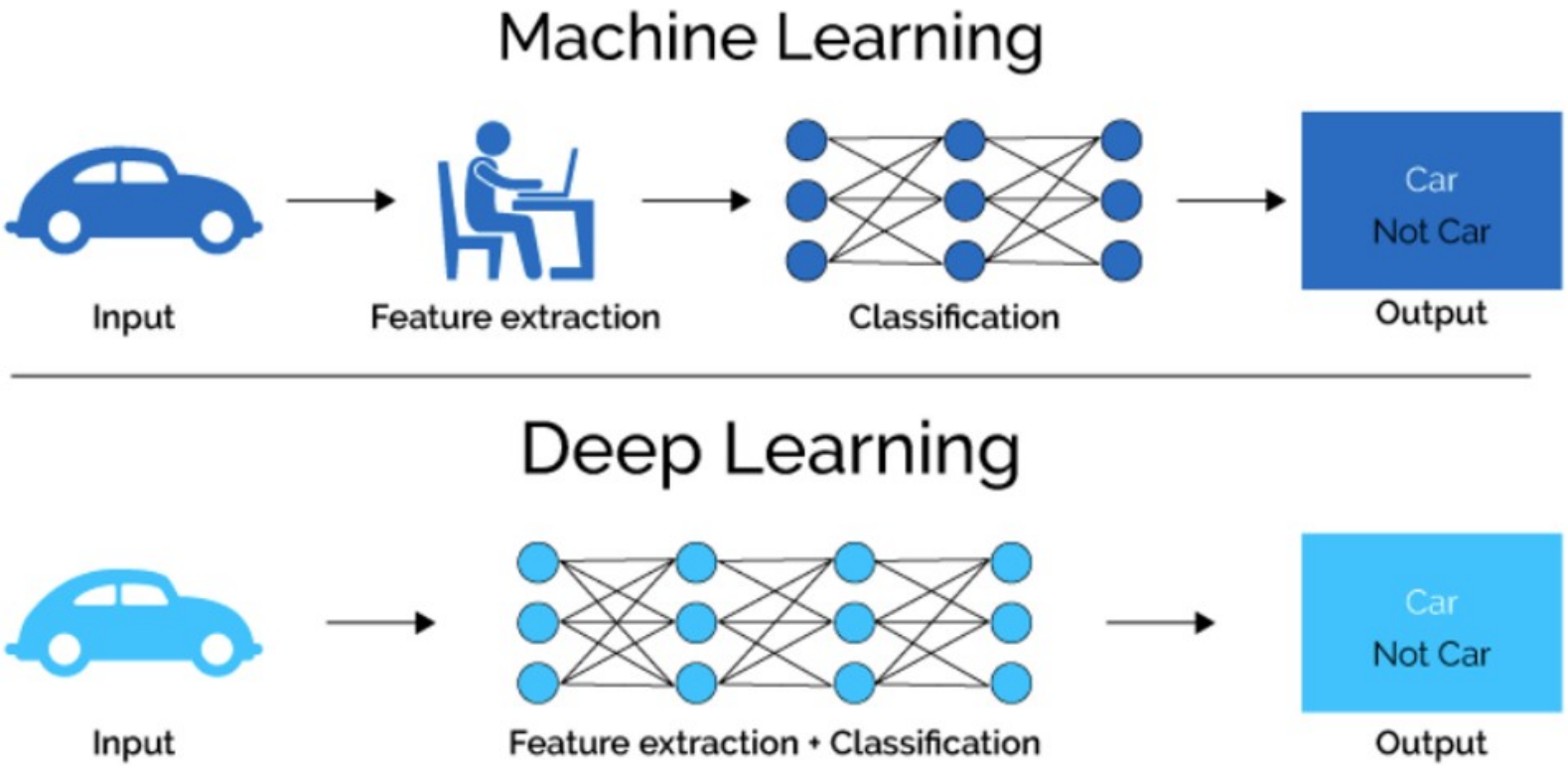


Machine learning in bigger scope

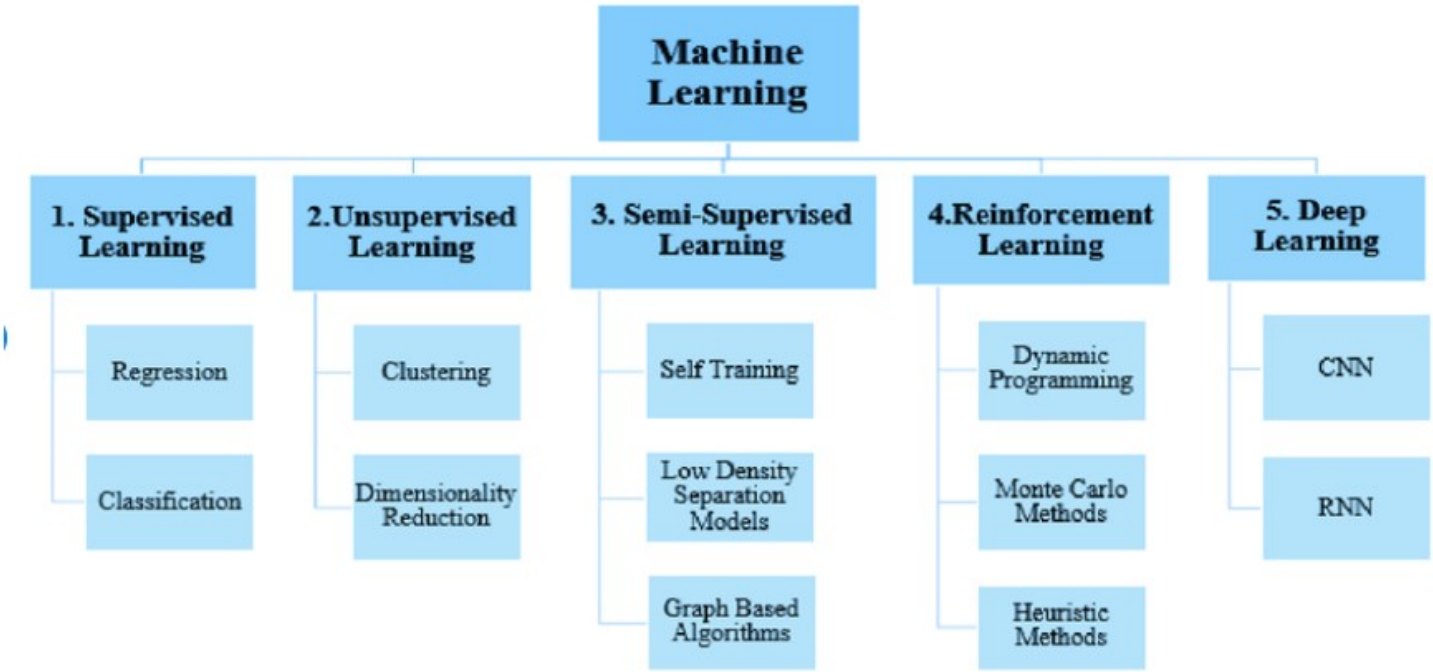


Machine Learning is a type of Artificial Intelligence. Deep Learning is an especially complex part of Machine Learning.

Machine learning versus deep learning



Different machine learning algorithms



Different machine learning types and algorithms.

Sample machine learning projects

- https://www.kaggle.com/dansbecker/your-first-machine-learning-model/tutorial
- https://www.kaggle.com/kanncaa1/machine-learning-tutorial-for-beginners#DATA-SCIENTIST
- https://jakevdp.github.io/PythonDataScienceHandbook/
- https://github.com/EthicalML/awesome-production-machine-learning
- https://www.analyticsvidhya.com/blog/2020/09/integrating-machine-learning-into-web-applications-with
  - https://github.com/NakulLakhotia/deploheroku
  - https://ml-with-flask.herokuapp.com/

Project 3

Deadline: 1 week

Note: Create a github repo from the start and populate it with your results

Dashboard

Project 1 дэх өгөгдөл болон түүний түүхэн өгөгдлүүдийг ашиглан Bokeh dashboard үүсгэнэ үү.
Жишээ:

- `https://github.com/bokeh/bokeh/tree/branch-3.0/examples/app/dash`

Thank you!