Microsoft Azure

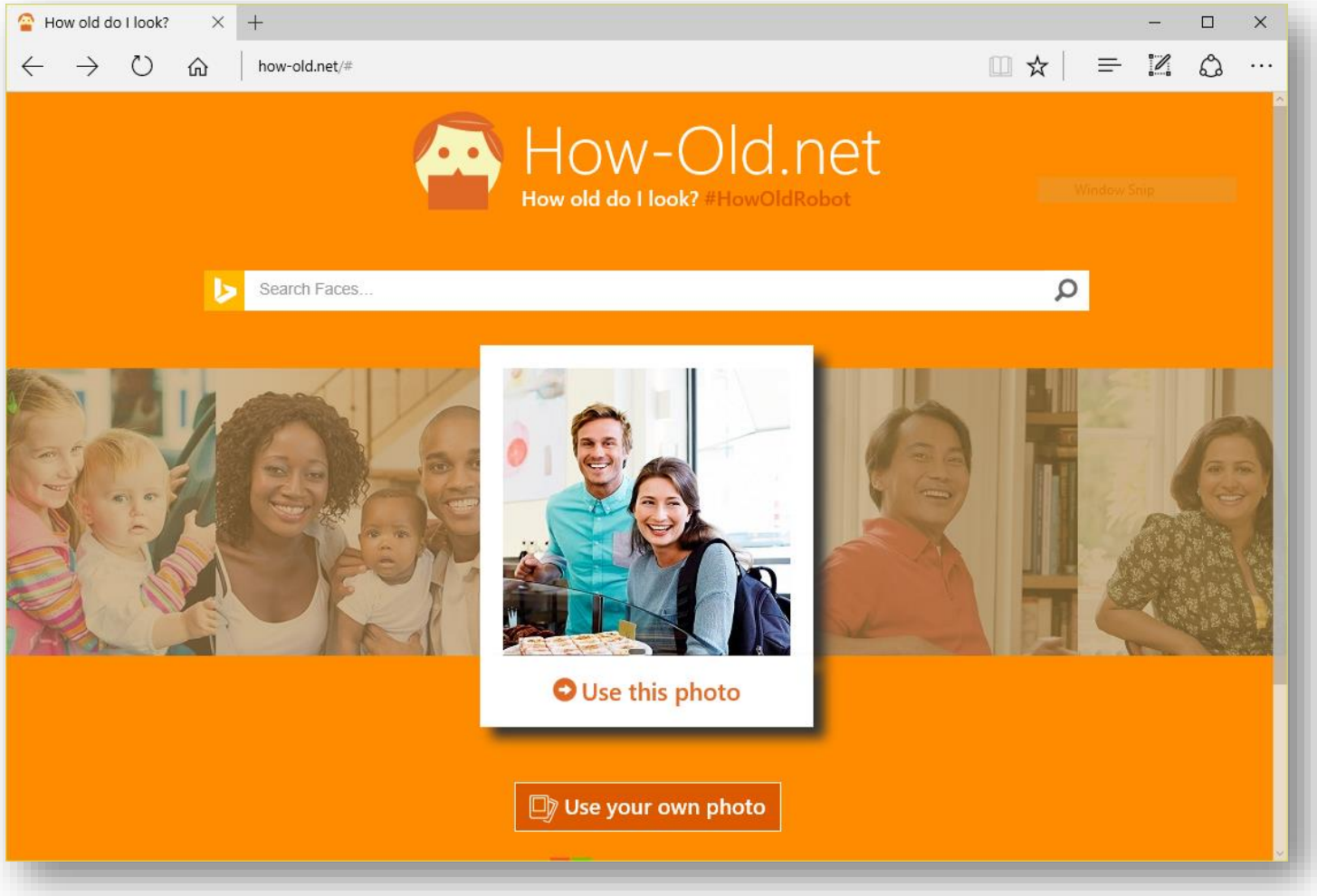
Azure Machine Learning

Microsoft Research

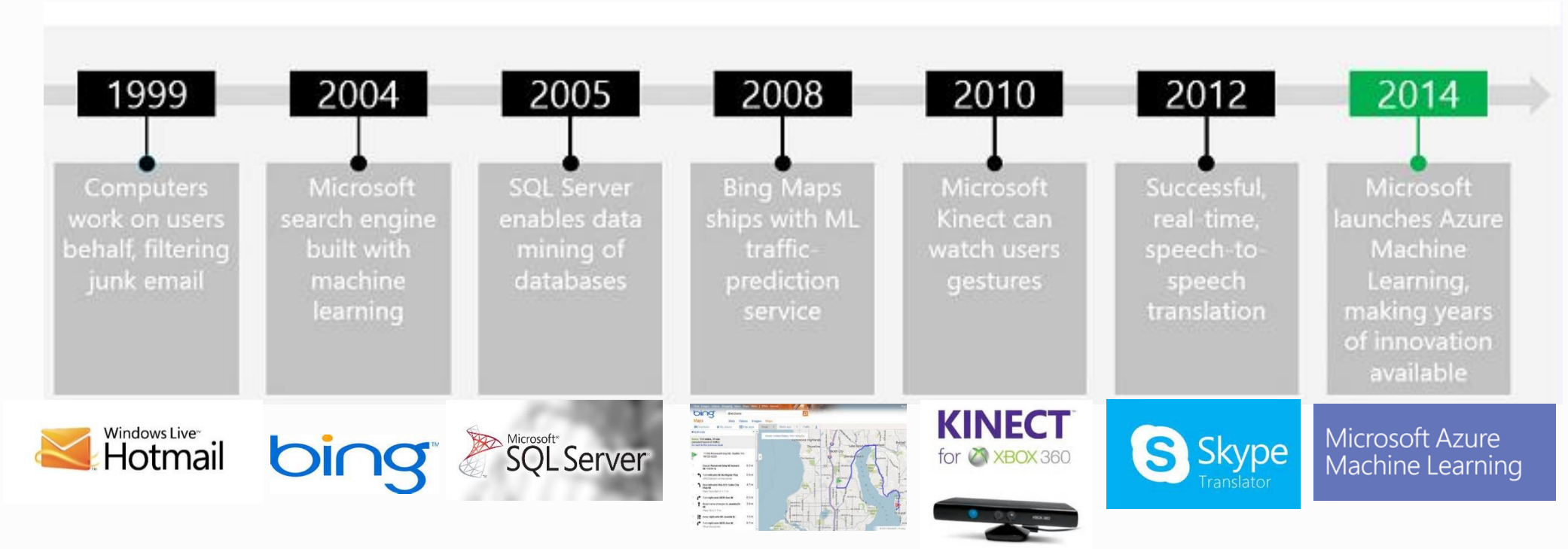
What is Machine Learning?

- Computer "learns" from data in order to perform predictive analytics
  - Credit-card fraud detection
  - Online shopping recommendations
  - Self-driving cars and more
- Supervised learning
- Unsupervised learning

Machine Learning in Action



Microsoft Machine Learning History



Modified from http://pulsweb.fr/predict-wine-quality-azureml

Azure Machine Learning

- Fully managed cloud service for building and operationalizing ML models

Fully managed

No software to install, no hardware to manage, and one portal to view and update.

Integrated

Simple drag, drop, and connect interface for Data Science. No need for programming for common tasks.

Best in Class Algorithms + R

Built-in collection of best of breed algorithms. Support for R and popular CRAN packages.

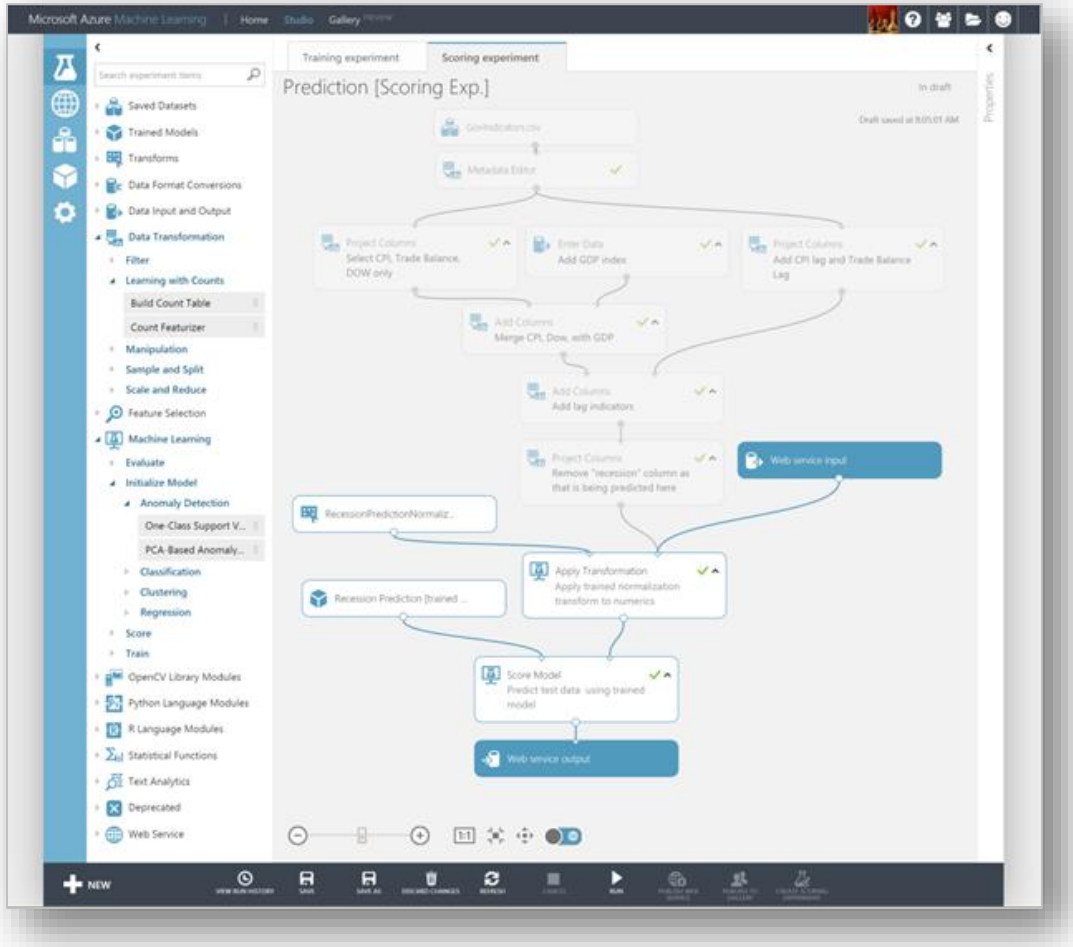
Deploy in minutes

Operationalize models with a single click. Monetize in Machine Learning Marketplace.

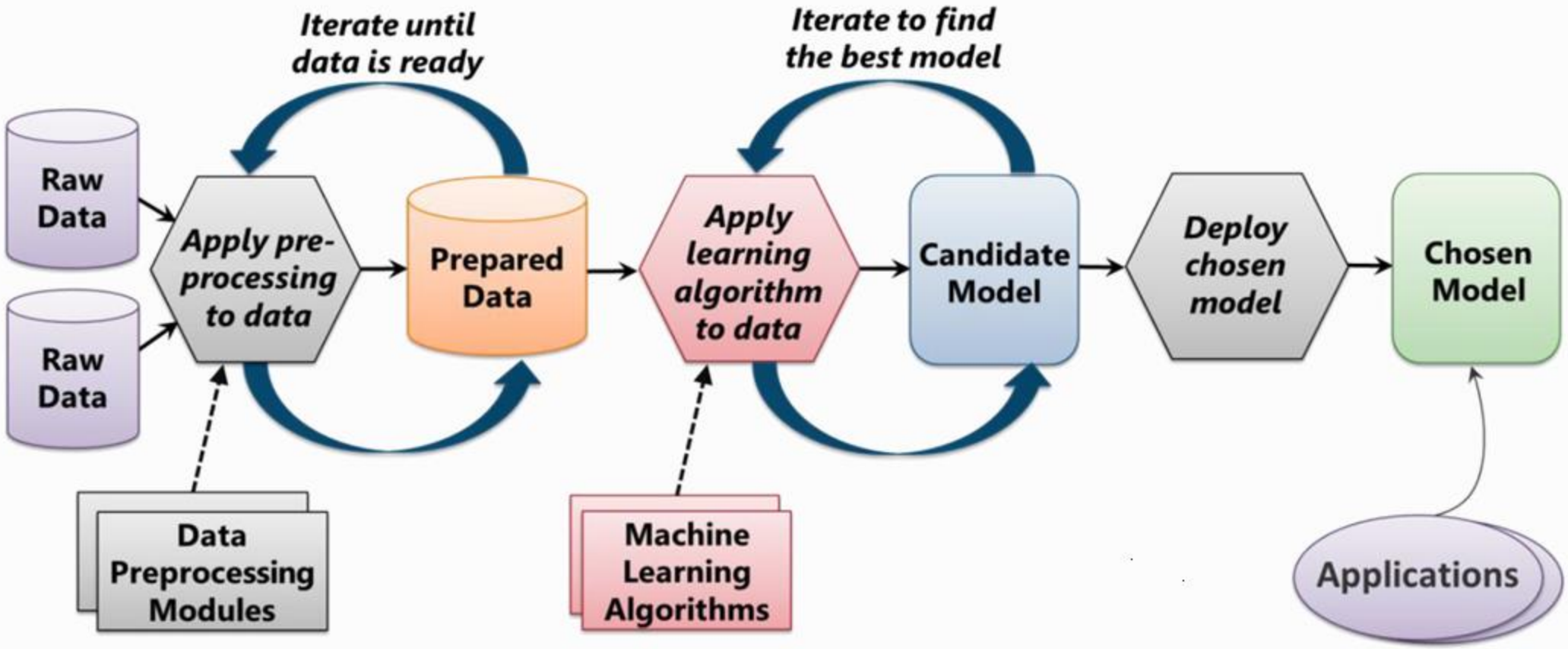
“I spent last semester building a regression model in Python, and I just did the same thing in 10 minutes with Azure ML”

Azure Machine Learning Studio

- Visual editor for composing, testing, and deploying ML models
  - Hundreds of modules
  - 25 algorithms for classification, regression, and more
  - Supports text input, CSV, TSV, OData, RData, ZIP, and more
  - Supports R and Python
- Machine learning for the masses

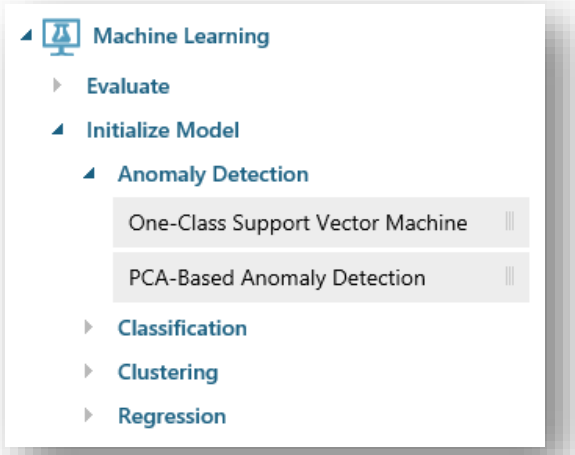


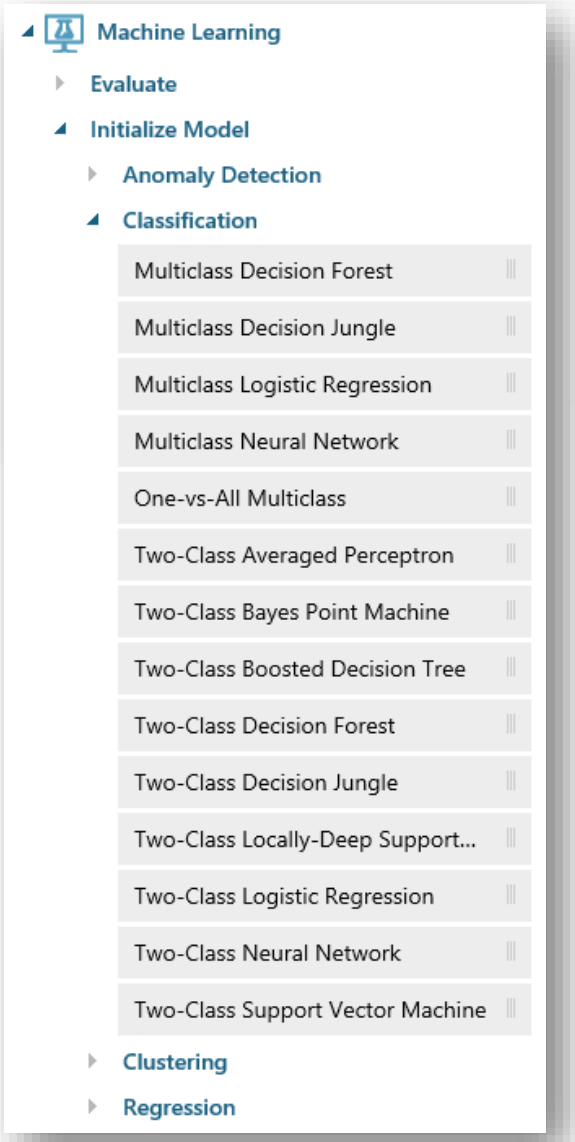
Machine Learning Process

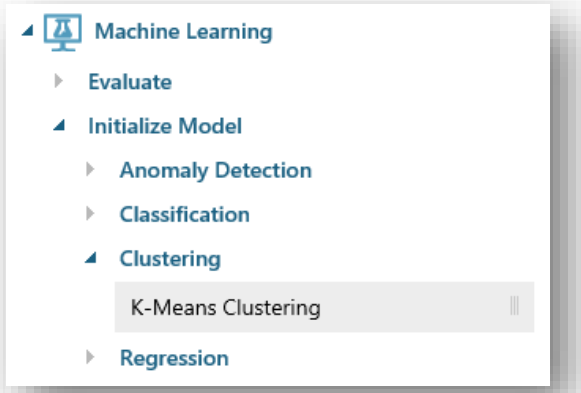


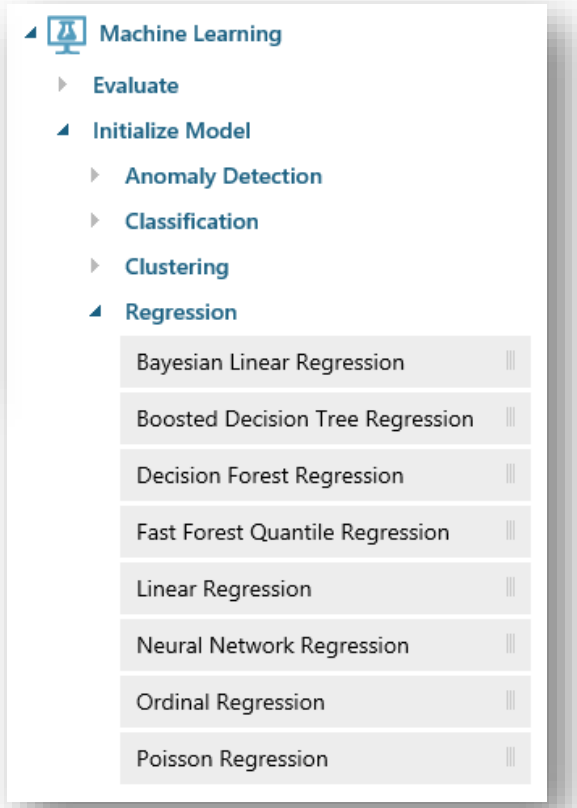
From: Introduction to Microsoft Azure by David Chappell

Azure ML Algorithms



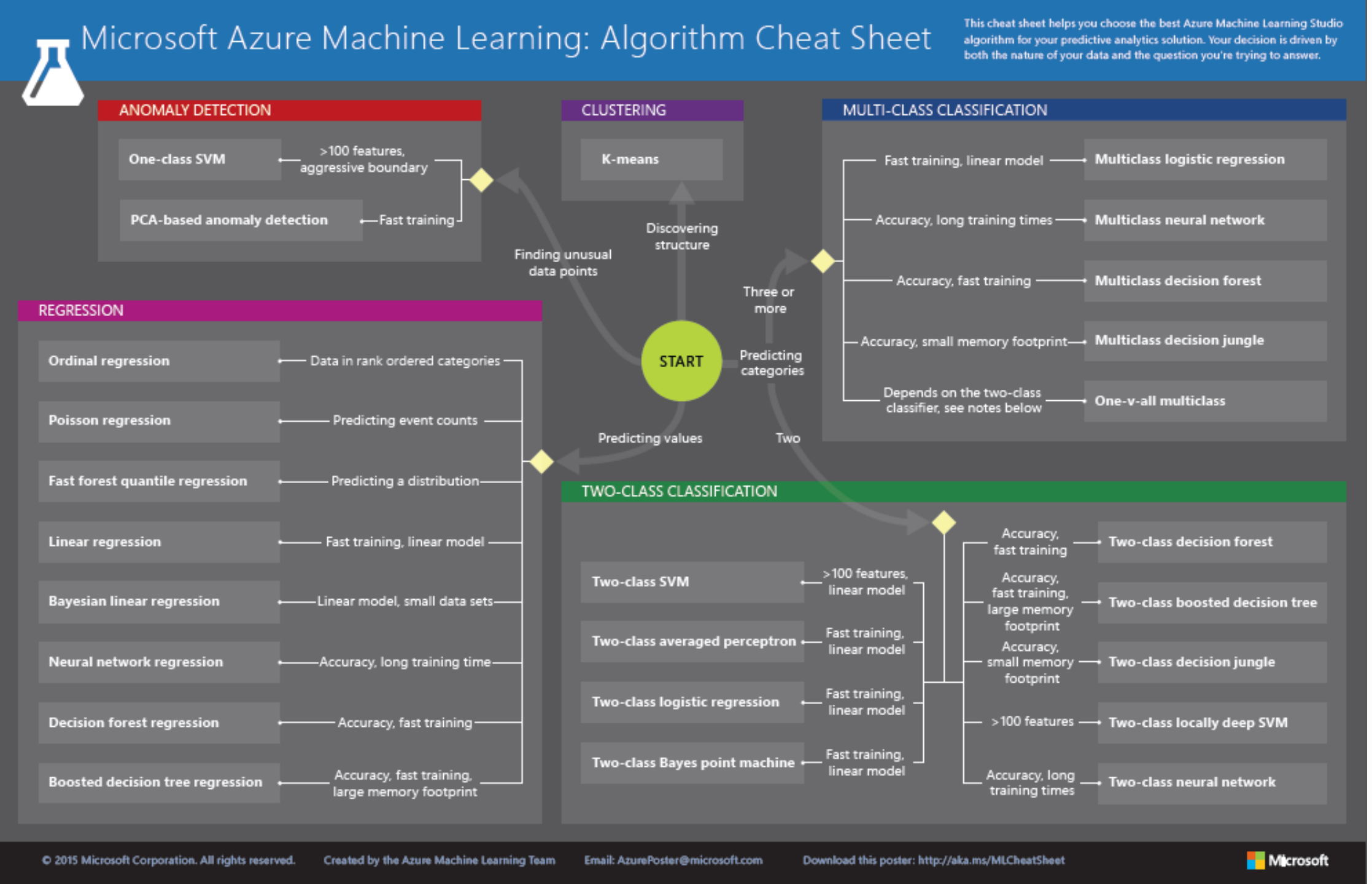






Microsoft Azure Machine Learning: Algorithm Cheat Sheet

This cheat sheet helps you choose the best Azure Machine Learning Studio algorithm for your predictive analytics solution. Your decision is driven by both the nature of your data and the question you're trying to answer.



Created by the Azure Machine Learning Team

Email: AzurePoster@microsoft.com

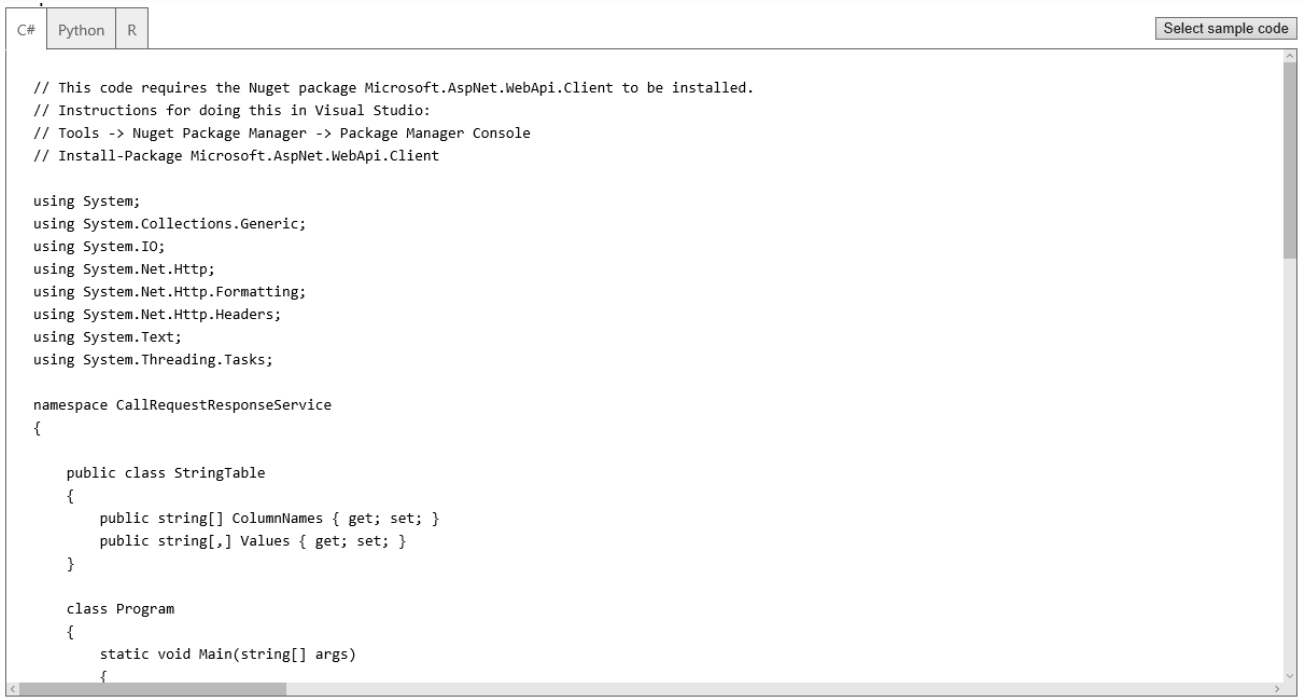
Download this poster: http://aka.ms/MLCheatSheet

Microsoft

http://aka.ms/MLCheatSheet

Deploying as a Web Service

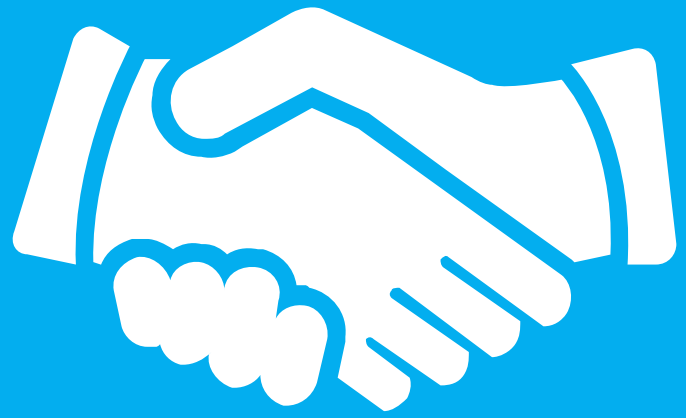
- A button click in ML Studio deploys a model as a Web service ("operationalizes" the model) and provides sample code for calling it in three languages



Free e-Book

http://bit.ly/a4r-mlbook

Hands-On Lab



Using Azure Machine Learning

Azure Machine Learning HOL.html