AutoML

Course Program

- Methods

  - Hyperparameter Optimization

  - Meta-Learning

  - Neural Architecture Search

- Systems

  - Auto-sklearn

  - H2O

  - DataRobot

Why AutoML?

AutoML serves two purposes:

- **For ML experts:**
  - Replace the domain knowledge/feature engineering.
  - Reduce function evaluations in cases when it is expensive (robotics, reinforcement learning).
- **For non-ML experts**
  - Make machine learning available.
  - Eliminate manual tuning by adequate testing.

The usual caveat

- **Garbage in, garbage out**.

- Complexities of many real-world data scenarios DO NOT DISAPPEAR MAGICALLY by using an AutoML system.

- Likely to work better on *consistently generated data*, usually not the type of data you find in a normal CRM/ERP system.

Evaluation

- Assignments (first one today!).
- Weight will be announced later.