

Class 3 overview: 8 Feb

Carry-forwards from last class

1. Toolchain recommendations, preferences

First hour

Any urgent concerns, announcements

Review of Probability HW2

Review of Linear Alg HW2

Second hour

Linear Algebra 3: Gaussian elimination, LU decomposition, four subspaces, Inverses

Third hour

Probability 3: Random variables, Discrete Distributions, Expectation

Fourth hour

Demonstration of linear algebra and probability notebooks.

Slides — background on the area:

Class teamwork

4 Basic Principles of Engaging Small Group Instruction



Positive Interdependence:
“Does one doing well help others?”
“Does task completion depend on everyone doing his/her part?”



Individual Accountability:
“Must everyone perform in front of someone?”



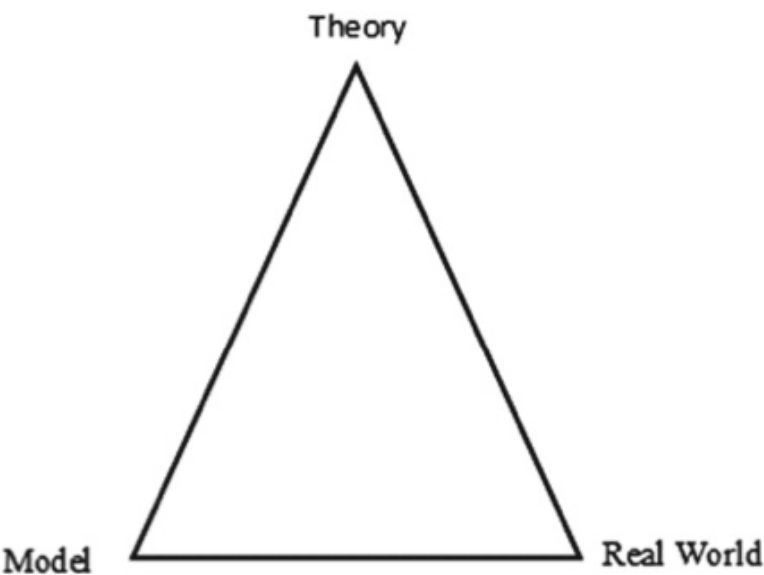
Equal Participation:
“Is participation approximately equal? Time? Turns?”



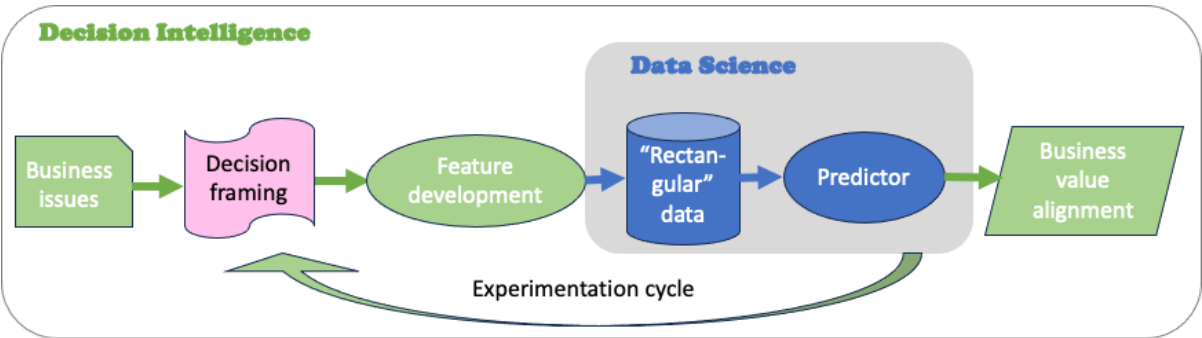
Simultaneous Interaction:
“What percent are performing at any one moment?”

1. Models, Theories, and Data

Fig. 1.1 Scientific triangle:
the complete solution of a
scientific problem is
obtained if we have a
theoretical model and a
mathematical model that
explain and quantify the
real-world phenomenon
under investigation



How is ML different than conventional statistics?



Assignments

Linear Algebra HW3

- readings: Read Strang, ch 1.4- 1.6 & 2.2 - 2.4, 2.6

Probability HW3

- readings: Evans, Ch 2.1, 2.2, 2.3