Data Science 410
Naive Bayes Models

PROFESSIONAL & CONTINUING EDUCATION
UNIVERSITY of WASHINGTON

Review

- Components of Time Series
  - White noise – IID Normally distributed, stationary, not predictable
  - Random walk – Change by innovation at each time step
  - Trend – Systematic change in value
  - Seasonal – Can be on any predictable period
- Stationary time series has constant variance
- ARIMA Model for stationary time series
  - AR – Autoregressive models linear dependency on past values
  - I – Integrative is differencing for random walk
  - MA – Moving Average for dependency of error term
  - Specified as order (p,d,q) for (AR,I,MA) components
  - Want stationary white noise residual
- SARIMAX model includes trend and seasonal components
  - Has order (p,d,q)(P,D,Q,M)

Schedule

Part 1	Part 2	Part 3	Part 4
Lesson 1 Data Exploration 1	**Lesson 3** Combinatorics	**Lesson 6** Intro to Regression	**Lesson 9** Näive Bayes
Lesson 2 Data Exploration 2	**Lesson 4** Hypothesis Testing	**Lesson 7** Regularization	**Lesson 10** Basic Text Analysis
Milestone 1 Data Visualization	**Lesson 5** Intro to Bayes	**Lesson 8** Time Series Analysis	**Milestone 4** Independent Project
	Milestone 2 Hypothesis Sim	**Milestone 3** Regression Models	

Reminders!

- Milestone 03 due March 13 – no extension possible!
- Assignment 08 due Today March 10
- No other graded assignments due!!

It is your responsibility to manage your time for overlapping deadlines!