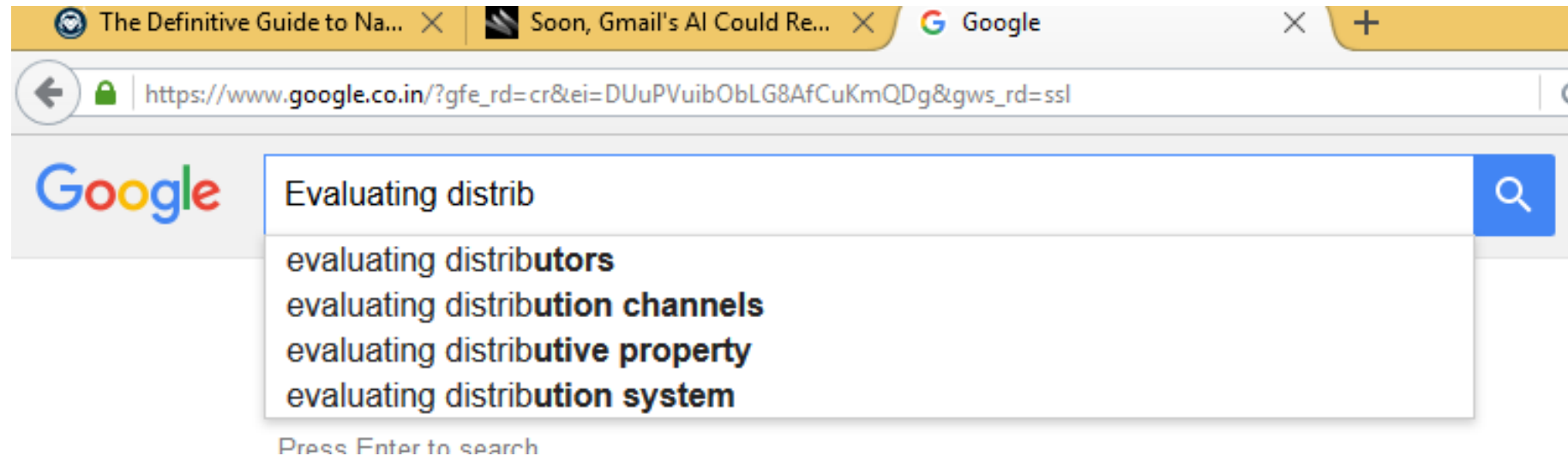# CS565: Intelligent Systems and Interfaces

Semester: Jan – May 2016
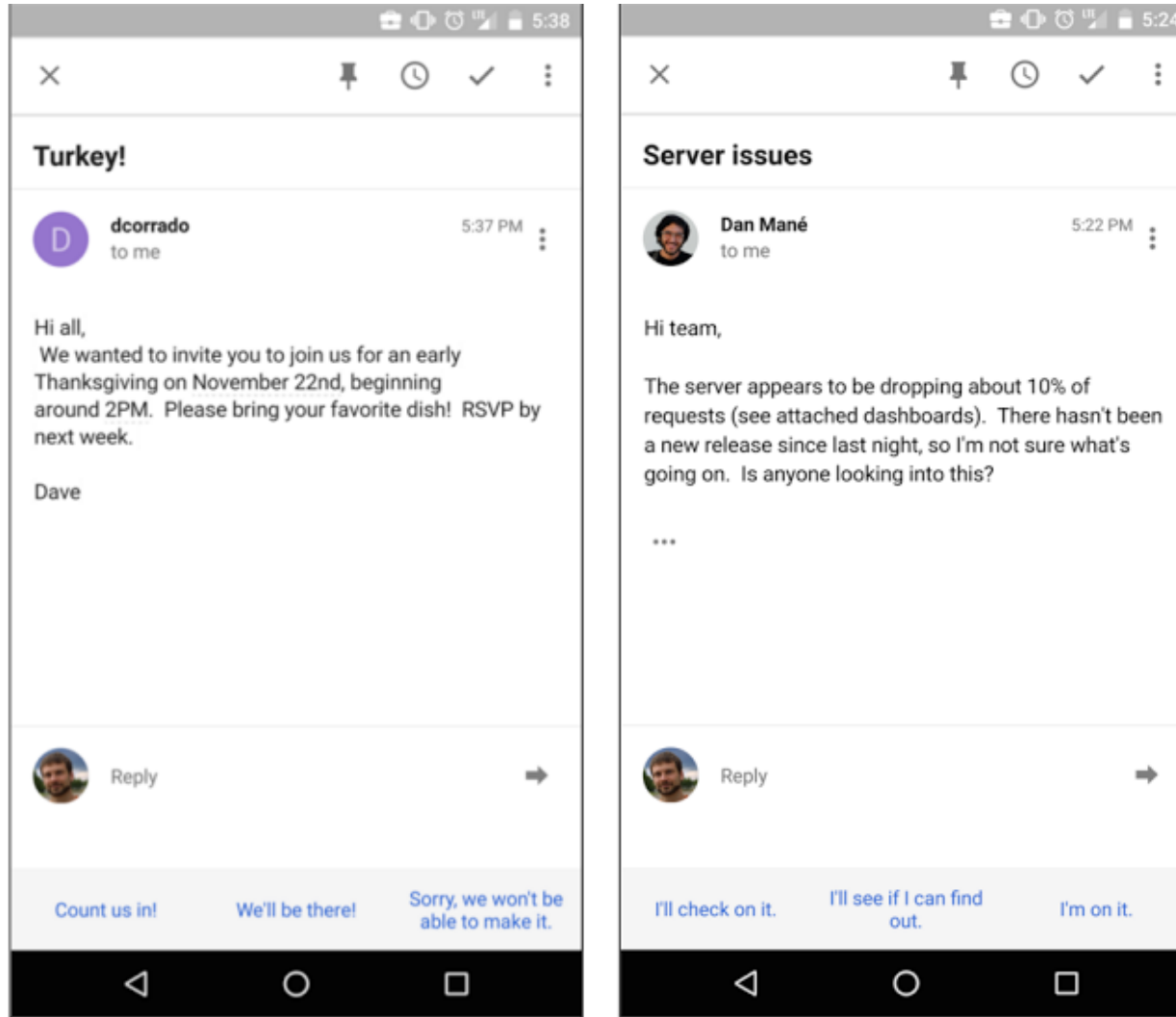
Ashish Anand

IIT Guwahati

What is this course?

- Some stuffs on NLP focused on very specific aspects of NLP and their interface with ML in general, probabilistic modeling and neural nets in particular.

- Will become clearer as we progress

Do we see NLP in our daily life?

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Some Applications

- Machine Translation
- Automatic Summarization
- Question-Answering System
- Paraphrase detection
- Sentiment Analysis
- Text Classification
- Conversational Agents
- Many many more …..

My motivation to study this course

HISTORY OF PRESENT ILLNESS :

The patient is a 58 year old right hand dominant white male with a long history of hypertension , changed his medications from Aldomet to Clonidine six weeks ago . The patient has a history of adult onset diabetes mellitus , ankylosing spondylitis , status post myocardial infarction in '96 (?) now with acute onset of left face and arm greater than leg hemiplegia and primary hemisensory loss on the left . His voice became slurred and he had a mild central dull headache .He was unable to move the left side of his body and felt numb on that side .

He was taken to Wayskemedcalltown Talmi and transferred to Heaonboburg Linpack Grant Medical Center with a computerized tomography scan showing a 1x2 thalamic capsular hemorrhage without superficial mass effect .

MEDICATIONS ON ADMISSION :

Vasotec 40 mg q.day , Soma 1 tablet q.day , Demerolprn , Clonidine .

ALLERGIES :

The patient has no known drug allergies .

FAMILY HISTORY : positive for diabetes mellitus , positive for cancer .

■ **DISEASE** ■ **MEDICINE & DOSAGE**
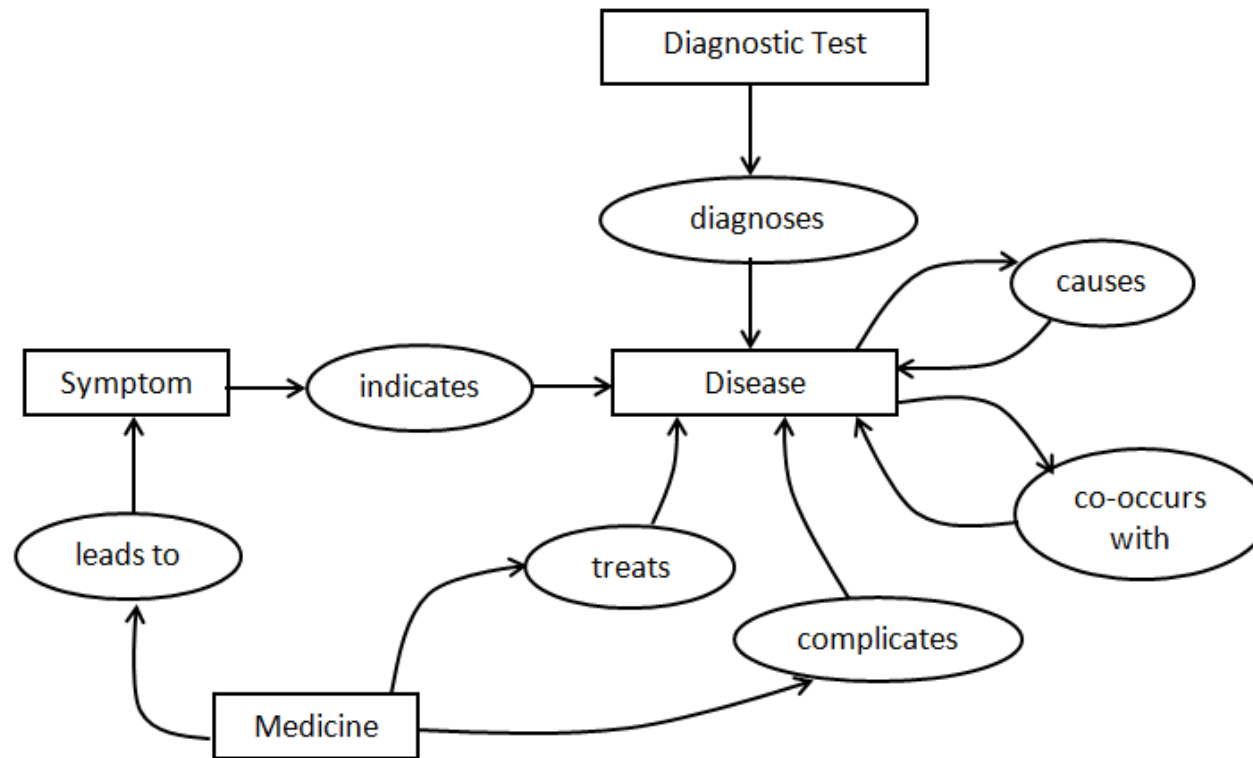
■ **DIAGNOSTIC TEST & RESULTS** ■ **SYMPTOMS**

My motivation to study this course

Administrative Stuff

Administrative Stuff

- Class Schedule
  - Tue, Wed, Fri: E1 Slot
  - Keep your Thursday E1 slot Free
- Marks Distribution
  - Assignments [1st will be posted next week]
  - Project + Term Paper
  - Exams [30% max]

Resources: Books

- No Text Book

- Reference Books
    - Speech and Language Processing: Jurafsky and Martin
    - Foundations of Statistical Natural Language Processing: Manning and Schutze
    - Neural Networks and Learning Machines: Haykin

Resources: Online courses

- http://cs224d.stanford.edu/syllabus.html [Deep Learning for NLP]
- http://web.stanford.edu/class/cs224u/ [Natural language Understanding]
- http://www.cs.columbia.edu/~mcollins/notes-spring2013.html
- http://www.cs.columbia.edu/~cs4705/
- http://www.cse.iitd.ac.in/~mausam/courses/csl772/autumn2014/

Resources: Online relevant materials

- NLTK basic : http://www.nltk.org/book/
- Python Numpy Tutorial : http://cs231n.github.io/python-numpy-tutorial/
- More will be added due progress of the course.
- Next week, course website/moodle/Piazza will be online.