Home

This multidisciplinary course brings together knowledge of linguistics and computer science to address the question of how can we move the bar forward to create automated agents that can converse "conversationally".

We'll begin by looking at the conversational capabilities of today's "intelligent agents" like Alexa, Siri and Hey Google end assessing where they fall short. We'll explore in depth the "chat bots" from the Alexa Prize Contest, which is trying to create agents that can chat for 20 minutes (none succeeded, but there were lots of interesting attempts). We'll look at research efforts, such as the Dialog State Tracking challenges, which focus on proving a common testbed and evaluate metrics to improve modeling dialog acts. And we'll look at the individual components, such as Spoken Language Understanding and Text Generation.

Throughout the course, we'll move back and forth between research ideas and implementation, with ongoing group projects implementing the best ideas in applications on a variety of platforms, from Alexa and web apps to other research projects at Brandeis.

Students should come to the course with the mindset of exploring a new territory and creating a map of what they find. We'll be using a number of resources, from blogs to the Zotero app to reify the map.

Schedule

Topics and assignments for each class are posted on the schedule page. Please check this regularly, as it may change throughout the year.

Grading

Class participation: 50%
Presentations 20%
Final paper/project: 30%

If you are a student with a documented disability on record at Brandeis University and which to have reasonable accommodations made for you in this class, please see me immediately.

Success in this 2 credit hour course is based on the expectation that students will spend a minimum of 9 hours of study time per week in preparation for class (readings, papers, discussion sections, preparation for exams, etc.).