

**שם הקורס:**  
**Deep Learning for Natural Language Processing**  
**למידה עמוקה עבור עיבוד שפה טבעית**

**מספר הקורס: 236605**

**סמסטר: חורף תשע"ח**

ד"ר קירה רדינסקי	<b>מרצה:</b>
<b>יום ראשון 9:30-11:30</b>	<b>שעות הרצאה:</b>
<b>יום שלישי 10:30-11:30</b>	<b>שעת תרגול:</b>
<b>הסתברות מ 094412</b> <b>אלגוריתמים 234247</b> <b>מבוא לתכנות מערכות 234112</b>	<b>דרישות קדם:</b>
	<b>אתר הקורס:</b>

**תאור הקורס**

“Deep Learning waves have lapped at the shores of computational linguistics for several years now, but 2015 seems like the year when the full force of the tsunami hit the major Natural Language Processing (NLP) conferences” (Chris Manning).

Natural language processing (NLP) is taking an increasingly dominant part in artificial intelligence today. Its applications are increasingly appearing in many fields and technologies: web search, advertisement, emails, customer service, language translation, radiology reports, etc .

The field of NLP is rich with many underlying tasks – words representations, relation extraction, semantic parsing and more. The machine learning community is thriving with elegant solutions to some of those tasks. Recently, deep learning approaches have obtained very high performance across many different NLP tasks. In this course we will deep dive to the cutting-edge research in NLP and focus on the latest advances in the application of deep learning in the field.

During the course we will cover the theory and practice of neural network models (including: cover word vector representations, window-based neural networks, recurrent neural networks, long-short-term-memory models, recursive neural networks, convolutional neural networks).

The goal of the course to make you the best, most insightful and responsible -  
- Natural Language researcher and practitioner wherever you go next.

The course will have HW assignments and a final project of building and implementing a neural network model on a large-scale NLP problem. The problem has to be publishable and the students will write a short paper (or long) intended for publication in a top tier conference. Last year, the students published 2 works in top tier conference in NLP and IR.