### Welcome and Introduction

Miguel Rios

Universiteit van Amsterdam

March 28, 2019

### Content

1 Introduction

2 Natural Language Processing

**3** Course Topics

• Github course page https://uva-slpl.github.io/nlp2/

- Github course page https://uva-slpl.github.io/nlp2/
- Syllabus

- Github course page https://uva-slpl.github.io/nlp2/
- Syllabus
  - Slides

- Github course page https://uva-slpl.github.io/nlp2/
- Syllabus
  - Slides
  - Reading material

- Github course page https://uva-slpl.github.io/nlp2/
- Syllabus
  - Slides
  - Reading material
- Projects

- Github course page https://uva-slpl.github.io/nlp2/
- Syllabus
  - Slides
  - Reading material
- Projects
- Posts

- Github course page https://uva-slpl.github.io/nlp2/
- Syllabus
  - Slides
  - Reading material
- Projects
- Posts
- Grading

- Github course page https://uva-slpl.github.io/nlp2/
- Syllabus
  - Slides
  - Reading material
- Projects
- Posts
- Grading
  - Report in groups of 3

- Github course page https://uva-slpl.github.io/nlp2/
- Syllabus
  - Slides
  - Reading material
- Projects
- Posts
- Grading
  - Report in groups of 3
  - Project 1 50%

- Github course page https://uva-slpl.github.io/nlp2/
- Syllabus
  - Slides
  - Reading material
- Projects
- Posts
- Grading
  - Report in groups of 3
  - Project 1 50%
  - Project 2 50%

Goal understanding of language
 Not only string or keyword matching

- Goal understanding of language
  Not only string or keyword matching
- End systems

- Goal understanding of language
  Not only string or keyword matching
- End systems
  - Classification: Text categorization, sentiment classification

- Goal understanding of language
  Not only string or keyword matching
- End systems
  - Classification: Text categorization, sentiment classification
  - Generation: Question answering, Machine Translation

- Goal understanding of language
  Not only string or keyword matching
- End systems
  - Classification: Text categorization, sentiment classification
  - Generation: Question answering, Machine Translation
- Computational methods to learn more about how language works (Computational Linguistics)

### Sentiment classification

# Natural language inference

### Machine translation

# Question answering

# Graphical Models

# Supervised learning

• Because NN models work but they may struggle with:

- Because NN models work but they may struggle with:
- lack of training data

- Because NN models work but they may struggle with:
- lack of training data
- partial supervision

- Because NN models work but they may struggle with:
- lack of training data
- partial supervision
- lack of inductive bias

### What is this course?

### Goals

• go through current literature

### Goals

- go through current literature
- define probabilistic models

#### Goals

- go through current literature
- define probabilistic models
- start combining probabilistic models and NN architectures

### Next class

• Probabilistic Graphical Models

### Next class

- Probabilistic Graphical Models
- Introduction to Word Alignment



### References I