NATURAL LANGUAGE: COURSE OVERVIEW

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OVERVIEW

- Course learning goals
- Syllabus
- Grading policy
- Contact
- Bibliography
- Inspiring people and resources

COURSE LEARNING GOALS

- Give students a broad historical perspective of the Natural Language Processing (NLP) field
- Equip students with the theoretical background and practical tools necessary to:
  - Analyze and generate human language
  - Propose a realistic and sound approach to NLP problems
  - Understand the papers from NLP conferences
  - Do (without much suffering) a master thesis in NLP
  - Show NLP knowledge in an interview for a job in NLP

SYLLABUS

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- Four main "knowledge" groups:
  1. Experimental Setup
     - Corpora (datasets)
     - Evaluation and evaluation metrics
  2. Techniques (from rule-based to prompt engineering)
  3. Language Representation (from classic logic to language models)
  4. Applications (including linguistically inspired ones)

GRADING POLICY

ALL TOGETHER

- X = Concepts 10%, Project 40%, MAP1 25%, MAP2 25%

- Possible "repescagem" (makeup exam or resit) of one or two maps in "Época Normal"
  - best grade is considered

- FinalScore = max(X, X *0,95 + (N-2)Mini-MAPS* 0,05)

- No minimum score in any component

- There is no "Época de Recurso" ← ATTENTION

- The project should be done in "Época Normal"

CONCEPTS' HOMEWORK

- Goals
  - Learn to share science
- Description
  - Choose a concept from a given list
  - Create a video (max 2 minutes) explaining that concept
- Dates
  - From 5 to 17 September (23h59)
- Groups
  - Max 4 students (preferably 3 – work with your peers!)

PROJECT

- Goals
  - Hands-on experience with an NLP task
  - Learn to analyze data and the achieved results
- Description
  - Perform an NLP, classification task
  - Write a 2-pages paper describing your work
- Dates
  - From 17 September to 15 October (23h59)
- Groups
  - Max 4 students (preferably 3), not necessarily the same group as before

2 MAPs

- Goals
  - Evaluate the students' knowledge
- Description
  - First map in the practical classes:
    - 25 and 26 September
  - Second map in the practical classes:
    - 20 and 21 October
  - 40 minutes each MAP

- Not possible to consult materials

- Individual

Mini-MAPs

- Goals
  - Self-assessment
  - Make students study with their own materials
    - Secret goal: make students go to theoretical classes
- Description
  - In most theoretical classes, 5 minutes MAPs
  - Questions about the materials from the current and previous classes
  - N – 2 best grades are considered (average)
- Students can consult materials
- Individual

CONTACT

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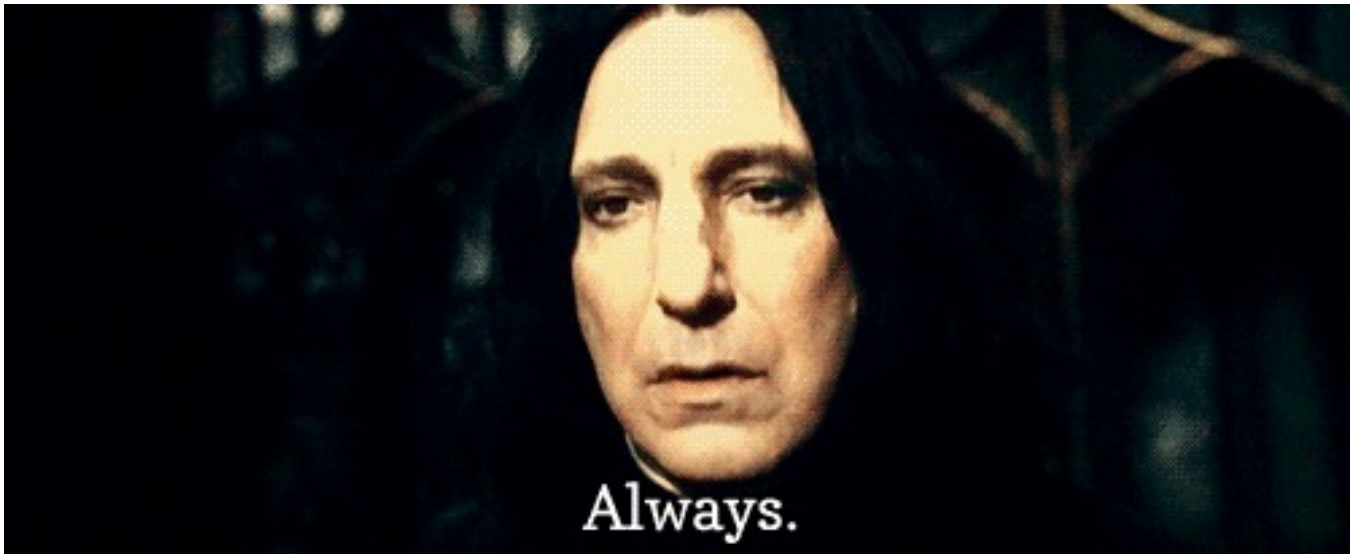
- Email ALWAYS to:

meic-ln@disciplinas.tecnico.ulisboa.pt



https://www.mugglenet.com/2019/11/the-significance-of-always/

BIBLIOGRAPHY

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- Jurafsky (online version)
- Sebenta (does not cover all the topics/slides)
- Slides from each class (I will make most of them available before each class)
- Other resources, indicated in the slides

INSPIRING PEOPLE AND RESOURCES

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- Thanks to:
  - Nuno Mamede, Sofia Sá, Fernando Batista, Eugénio Ribeiro, Margarida Campos, Rui Ribeiro, Rui Henriques, Vânia Mendonça, Ricardo Rei, Gonçalo Raposo, Miguel Gonçalves, John Mendonça and João Cardoso… for all the inspiration, tips and shared knowledge
- Inspiring resources:
  - Jurafsky (online version)
  - Jay Alammar materials
  - Percy Liang and Graham Neubig courses
  - ChatGPT
    - most images and many (more or less) inspiring conversations
  - … and to many other online resources, indicated in each slide