Linguística Computacional: Problemas, Tendências e Desafios

Evandro L.T. Paradela Cunha
DCC-UFMG / InWeb
It was the best of times, it was the worst of times, it was the age of wisdom, it was the age of foolishness, it was the epoch of belief, it was the epoch of incredulity, it was the season of Light, it was the season of Darkness, it was the spring of hope, it was the winter of despair, we had everything before us, we had nothing before us, we were all going direct to heaven, we were all going direct the other way - in short, the period was so far like the present period, that some of its noisiest authorities insisted on its being received, for good or for evil, in the superlative degree of comparison only.

Il était le meilleur des cas, il était le pire des temps, c'était l'âge de la sagesse, c'était l'âge de la folie, c'était l'époque de la croyance, c'était l'époque de l'incrédulité, c'était la saison de la lumière, il a été la saison des ténèbres, c'était le printemps de l'espoir, c'était l'hiver du désespoir, nous avions tout ce dont nous sommes saisis, nous n'avions rien devant nous, nous étions tous d'aller directement au ciel, nous allions tous directement dans l'autre sens - en bref, la période était si loin comme la période actuelle, que certains de ses plus bruyants autorités ont insisté sur son retour, pour le meilleur ou pour le mal, dans le degré superlatif de comparaison seulement.
Revisiting the concept of preparation for oxidative stress in hypoxia-tolerant animals

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The role of reactive oxygen species (ROS) and antioxidants as part of the survival machinery during episodes of hypoxia exposure in hypoxia-tolerant animals has been under investigation for the past twenty years. One of the fundamental adaptations is the capacity to modulate the antioxidant apparatus during exposure to low oxygen tensions. This mechanism, coined "preparation for oxidative stress", was considered a form of prevention against a rise in ROS formation following reoxygenation [1-3]. This mechanism was proposed after the observation that many animal species, ranging from crustaceans and gastropods to vertebrates, are able to increase the activity (and/or expression) of antioxidant enzymes during hypoxia/anoxia exposure. Some examples from the literature [3,4] are presented herein. Exposure of amphipods Monoporeia affinis to hypoxia for 5 or 9 days induced a rise in the activities of catalase and SOD. Crabs Chasmagnathus granulata under anoxia exposure (for 8 h) presented increased catalase and glutathione S-transferase activities in gills. A study with barnacles Balanus amphitrite under 24 h anoxia or hypoxia exposure showed increased catalase and SOD activities in both larvae and adults. Pacific oysters Crassostrea gigas under hypoxia (3 to 24 days) presented increased expression (mRNA) for glutathione peroxidase (GPX) in mantle, gill and hepatopancreas. In the disc abalone Haliotis discus, hypoxia (up to 24 h) prompted increased levels of
My name is
Stephen Hawking
• Mecanismo de busca
• Tradutor automático
• Corretor ortográfico e gramatical
• Sistema de comunicação baseado no computador (previsão de texto + sintetizador de fala)

O que essas tecnologias têm em comum?
Todas elas relacionam língua e computação
Definição

- Linguística computacional é:
  - um campo multidisciplinar
  - interessado na modelagem da linguagem natural
  - a partir de uma perspectiva computacional
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Um pouco de história...

Anos 50

Guerra Fria

“Primeiros” computadores
Um pouco de história...

- Tradução automática
  - sobretudo de textos científicos russos para o inglês

- O grande erro:
  - acreditar que os cálculos aritméticos que os computadores conseguiam fazer seriam suficientes para traduzir textos complexos
Tradução automática

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New! Click the words above to edit and view alternate translations. Dismiss
Agentes conversacionais

- *Chatbot* = chat + robot
  - “comum” em lojas, empresas etc.

- Teste de Turing
  - testa a capacidade de uma máquina exibir comportamento equivalente a um ser humano
Processamento de texto

- Corretores gramaticais e ortográficos
- Sumarizadores de texto
Linguística forense computacional

- Detecção de plágio
- Identificação de autoria de textos
Interação humano-computador

- Sintetização de voz
- Reconhecimento de fala
Reconhecimento de caracteres

- OCR = Optical Character Recognition
Aplicações para pesquisa linguística

- Estemização
  - “jogadores” ---> “jog”

- Lematização
  - “jogadores” ---> “jogador”
Carreira

- Pesquisa acadêmica
- Desenvolvimento de software
  - Google, Microsoft, Yahoo, Apple etc.
- Aplicações Web
- Desenvolvimento de hardware
Obrigado!

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