
Critical Algorithm Studies 2017

Introduction

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Introduction

Critical Algorithm Studies is an emerging field within the realms of the **Social Sciences** and **Computer Science**. No general definition exists so far.

It is concerned with studying algorithms from a **Critical Theory** stance.

Algorithms have become ubiquitous due to the ongoing **digital transformation** of society - and so has the need to study their effects on people, their constitution and scope of design (“Gestaltungsmöglichkeiten”).

Therefore, this course deals with interdependencies between **culture, society** and **algorithmic systems**.

Motivation

Re-Inventing (Bad) Wheels,
Algorithmically

evidence for the validity of automated face-induced inference on criminality, despite the historical controversy surrounding the topic. Also, we find some discriminating structural features for predicting criminality, such as lip curvature, eye inner corner distance, and the so-called nose-mouth angle. Above all, the most important discovery of this research is that criminal and

In reply to Stephen Mayhew



Stephen Mayhew @mayhewsw · Nov 17

@mayhewsw The abstract says it all. Unbelievable...

15

136

122



15

136

122



Motivation

Algorithmic Bias: Gender

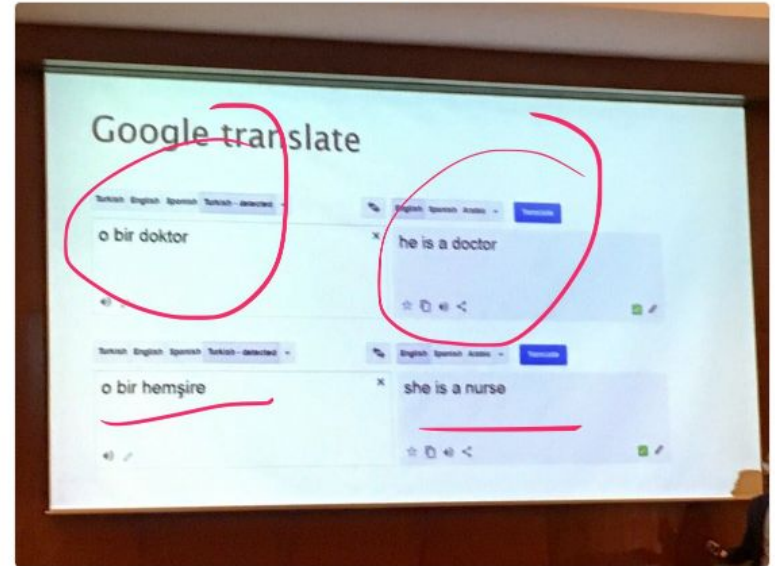


Zeynep Tufekci ✓
@zeynep



Following

Google translate: Turkish 3rd person pronoun "O"=gender-neutral. "O" is a doctor → "He" is a doctor. "O" is a nurse → "She" is a nurse. #fatml



RETWEETS 264
LIKES 312



6:14 PM - 18 Nov 2016

Motivation

Filter Bubbles

LIBERAL ⓘ

SHOWING POSTS ABOUT:
"PRESIDENT TRUMP"

CONSERVATIVE ⓘ

MSNBC about an hour ago

The dossier of intelligence about Donald Trump ties to Russia remains unconfirmed, but pieces of it have checked out upon investigation by the press, *The Rachel Maddow Show* explains.




Pieces of Trump dossier check out despite invest...
The primary government investigators are former Trump campaign officia...
MSNBC.COM

994 142 328

The Daily Caller 2 hours ago

Things are not looking good for the media



Poll Shows President Trump More Popular Than...
President Donald Trump is more popular than the news media, a new Su...
DAILYCALLER.COM

2.8K 110 216

Breitbart 4 hours ago

cf. Wall Street Journal "Blue Feed, Red Feed"
<http://graphics.wsj.com/blue-feed-red-feed/#/president-trump>
accessed @ 08.03.2017

Course Outlook

- Introduction and preliminary assignment of topics
 - March 9th
- 8 blocked weekly seminar sessions (mandatory)
 - Thursday 16:00 - 18:00 at Seminarraum Gödel
 - April 27th - June 29th
- Final written assignment
- Contact Email: ca2017@kr.tuwien.ac.at
- Public lecture blog with postings about the lecture and relevant materials

<https://algorithmstudies.wordpress.com>

Presentation & Discussion

- All participants choose a topic (alone or with a partner)
 - Presenters must read per topic
 - Core papers (mandatory)
 - At least one additional scientific paper not from the list (mandatory)
 - Supplemental papers (optional, but highly recommended)
 - Presentation (30 minutes) + group discussion
 - Slides will be publicly posted on the blog
 - Prepare 2 impulse questions for the following discussions
 - All participants must read one supplemental paper per topic
 - Papers available via OwnCloud Share @
 - <http://bit.ly/2m5TmrS>
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Final Write-up

- Maximum 1 A4-Page, not more
- Will NOT be made public
- Focus is self-reflection & feedback about the seminar

Lead Questions

- Which aspects of society are most critically affected by algorithms and their challenges/issues?
 - How is my own life affected by algorithms?
 - How did this course change my view on Computer Science and my current/future work with algorithmic systems?
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Grading

40% Presentation

40% Discussion & Participation

20% Final Write-Up

100% Total

Topics & Dates

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|------------|--|
| April 27th | 1. What is an algorithm? |
| May 4th | 2. Embedded Values and Biases in Algorithms |
| May 11th | 3. Culture, Society and Algorithms |
| May 18th | 4. Methods and approaches for studying algorithmic systems |
| May 25th | holiday |
| June 1st | 5. Algorithmic Fairness |
| June 8th | 6. Ethics and Algorithms |
| June 15th | holiday |
| June 22nd | 7. Surveillance, Privacy and Data in the Smart City |
| June 29th | 8. Accountability, Policy and Law |
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Questions & Topic Assignment
