

CS 4873: Computing, Society & Professionalism

Blair MacIntyre | Professor | School of Interactive Computing

Class 1: Welcome and Overview

January 20, 2021



Introductions



- Instructor
 - Blair MacIntyre
 - blair@cc.gatech.edu
 - Office Hours:
 - 10:20-11 MW (after class period)
 - During class period when the lecture is pre-recorded
 - By appointment
- Augmented, Virtual, and Mixed Reality; Games; Graphics; HCI
 - Professor, CoC/IC; Adjunct Professor, LMC
 - Recently: 4 years as Principal Research Scientist, Mozilla (2016-2020) working on WebXR and web as open, accessible resource for all
 - Design of MR/AR experiences (3D in the world), web-based XR, privacy and security of XR
 - Background in math, CS, 3D graphics
 - PhD research in distributed interactive 3D software design



Who are your TAs?

Stanley Cantrell (cantrell)	C09: Thursday 03:30 pm-05:25 pm C14: Friday 12:30 pm-02:25 pm
Ezekiel Day (eday30)	C04: Wednesday 05:00 pm-06:55 pm C08: Friday 12:30 pm-02:25 pm
Sanghavi Gaddam (sanghavig)	C03: Wednesday 05:00 pm-06:55 pm C05: Thursday 05:00 pm-06:55 pm
Arvin Goyal (agoyal301)	C11: Friday 05:00 pm-06:55 pm
Nate Knauf (nate.knauf)	C02: Friday 12:30 pm-02:25 pm C10: Friday 03:30 pm-05:25 pm
Vy Le (vy31)	C13: Friday 03:30 pm-05:25 pm
Stephanie Lee (elee463)	C01: Thursday 8:25 am-10:20 am C06: Wednesday 06:30 pm-08:25 pm
Kylie McArthur (kmcarthur3)	C07: Thursday 05:00 pm-06:55 pm C15: Wednesday 06:30 pm-08:25 pm
Jas Pyneni (jpyneni) <i>HEAD TA</i>	C12: Thursday 12:30 pm-02:25 pm
Dhruv Samdani (dsamdani)	C16: Friday 03:30 pm-05:25 pm C17: Thursday 05:00 pm-06:55 pm

Background + one topic or issue about computing and society that interests or concerns you, and why

TA Introduction: Who are your TAs?

By the end of this course, I hope to have learned...?

- Take 2 minutes to **write out in chat what you hope to learn from this course**. In the meanwhile, let's hear from our TAs!

Course Objectives

Ethics

- What do "right" and "wrong" mean anyway?

Professional Ethics

- What special responsibilities do we have as computing professionals?

Computing and Society

- In what ways does computer technology impact society?

Argumentation

- How do you construct a well-reasoned argument?

By the end of this course...

- How do we protect people's privacy in face of economic incentives to collect, process and analyze people's personal data?
- How do we empower marginalized communities instead of exploiting them with technology?
- How do we continue to trust media in the face of algorithmically created and distributed disinformation?

By the end of this course...

- How is a product/project achieving ethical accountability?
- How might individuals' privacy and anonymity be impinged via aggregation and linking of data a product might need?
- How do we know that the data is ethically available for its intended use?
- How do we know that the data is valid for its intended use?
- How transparent does the machine learning model need to be and how is that transparency achieved?
- What are likely misinterpretations of the results and what can be done to prevent those misinterpretations?

Differences of Opinion



- We each represent different views, and bring with us different perspectives
- It's always OK to challenge someone's views
 - Must be able to explain why you believe what you believe
 - Acceptable to say: "I don't know. I need to think about it more."
- Always be respectful
- Someone with different views is interesting. Try to understand them!



Discussion: The Stop Sign

- You are driving out in the desert. You can see in all directions for miles. No one else is around. You see a stop sign. Do you stop? Why or why not?
- Answer the poll and write out why in chat.

Logistics

- Course webpage & syllabus:
<https://blairmacintyre.me/cs4873-s21>
- Canvas for announcements, Perusall, and homework submissions
- Videos and (most) readings in Perusall
- You'll go over the webpage in more detail in your recitation

What does “remote synchronous” mean?

- We have a class time, which guarantees we *can* meet together; attendance will not be required at lectures (after this one)
 - Most lectures will be pre-recorded
 - Mondays: instructor available to meet in Teams
 - Wednesdays: instructor and TAs available to meet in Teams
- This is the first time I’ve taught this course, so there will be some experimentation. Thanks for understanding!
 - No exams; instead, weekly quizzes and reading commentaries

Course Structure

- 50-minute lectures twice a week:
 - M/W 9:30-11:20
 - Virtually via Teams for now
- 2-hour recitations once a week
 - Run by one of your TAs
 - Attendance mandatory
 - Virtually via BlueJeans or Teams (TA will tell you where/how to meet via Canvas for your section)
 - Recitations start **TODAY**
- Topic schedules on course webpage (may change)

Grading

	% of final grade
Reading Commentaries	10
Quizzes	10
Recitation participation	25
Homeworks	25
Term paper	25
Term paper presentation	5

Reading commentaries

- <https://blairmacintyre.me/cs4873-s21-homeworks#reading-commentaries>
- Each week, you will write a commentary for **one or more of the required assigned reading** (there are no more than three per week). The details will be specified on an assignment on canvas
- Each reading commentary should be a short paragraph (~4 sentences) and should **end with a question or discussion prompt**, related to the reading, that you would like to talk about.
- Due an hour before class on Canvas.

Required text

- Ethics for the Information Age*, Seventh Edition or above, by Michael Quinn
- Articles accessed through GT library and GT VPN.
- Articles available online.
 - I will put many inside Perusall on Canvas

* (You may rent an electronic copy rather than buying it.)

“A branch of philosophy that involves systematizing, defending and recommending concepts of right and wrong conduct.”

- Anonymous Wikipedia contributors

What is ethics?

Difference between legal and ethical

- Laws formalize what people **can and cannot** do in society, while ethics are moral standards that govern what people **should or should not** do
- In some instances, legal regulations prohibit people from carrying out certain tasks, such as administering life-saving support, that would generally be considered morally permissible actions.
- This isn't to say legal and ethical are always distinct.

What are some historic example of actions that were illegal at one time, but that are now largely considered ethical?

How about actions that were considered legal at one time, but are now considered unethical?

Difference between legal and ethical

- Some laws generate few negative responses, as their intent to protect and promote the safety and well-being of the public is virtually indisputable.
- Other laws, however, generate disagreement among citizens.
- While legal and moral issues sometimes coexist in harmony, they can also raise questions and generate conflicting opinions.
- Theory and practice of law can also differ in ethical or moral standing.

What special responsibilities do we have as computing professionals?

Write out your thoughts in chat!

Some Examples We May Consider in the Class Going Forward

- Algorithmic bias
 - Amazon's hiring tool
- Privacy
 - “Always on” Internet of Things (IoT) devices
- Governmental surveillance
 - Public surveillance in China
- Behavioral prediction markets and programming
 - The Facebook emotion contagion study

BUSINESS NEWS OCTOBER 9, 2018 / 11:12 PM / A YEAR AGO

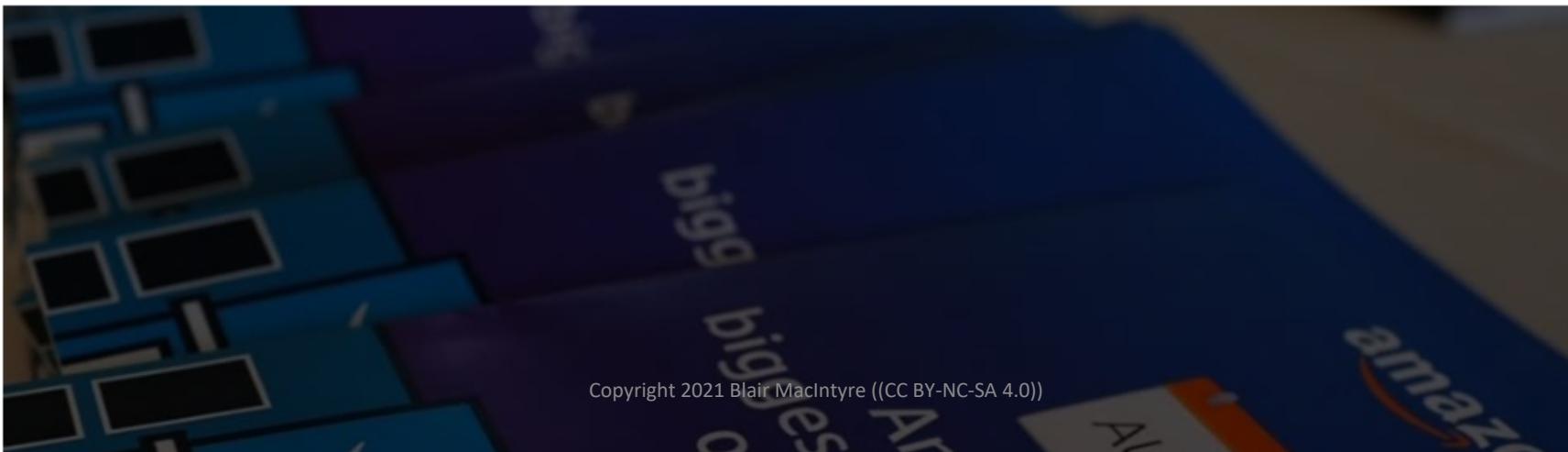
Amazon scraps secret AI recruiting tool that showed bias against women

Jeffrey Dastin

8 MIN READ



SAN FRANCISCO (Reuters) - Amazon.com Inc's ([AMZN.O](#)) machine-learning specialists uncovered a big problem: their new recruiting engine did not like women.



Don't Buy Anyone an Echo



Adam Clark Estes

12/05/17 10:28am • Filed to: GRINCH WEEK ▾



1.6M



1.3K



66



Amazon/Gizmodo

Three years ago, we [said](#) the Echo was “the most innovative device Amazon’s made in years.” That’s still true. But you shouldn’t buy one. You shouldn’t buy one for your family. You definitely should not buy one for your friends. In fact, ignore any praise we’ve ever heaped onto smart speakers and voice-controlled assistants. They’re bad!

Copyright 2021 Blair MacIntyre ((CC BY-NC-SA 4.0))

China's CCTV surveillance network took just 7 minutes to capture BBC reporter

Posted Dec 13, 2017 by [Jon Russell \(@jonrussell\)](#)

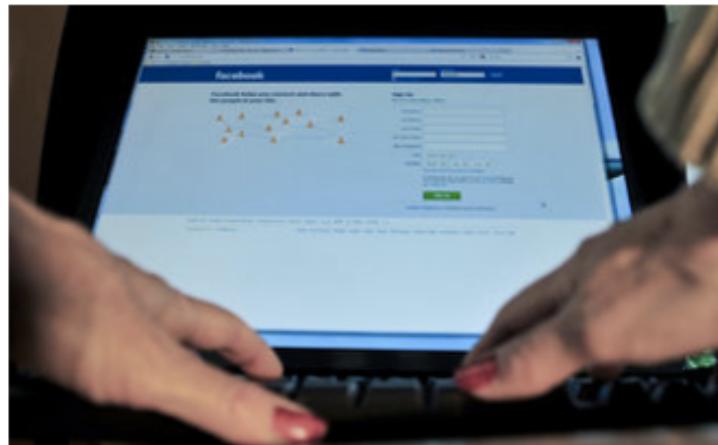


It took Chinese authorities just seven minutes to locate and apprehend BBC reporter John Sudworth using its powerful network of CCTV camera and facial recognition technology.

This wasn't a case of a member of the media being forcibly removed from the country. [The chase was a stunt set up](#) to illustrate just how powerful and effective the Chinese government's surveillance system can be. It's a stark example of the type of monitoring that China has invested heavily in over recent years with the aim of helping police do their job more efficiently.

Facebook Tinkers With Users' Emotions in News Feed Experiment, Stirring Outcry

By VINDU GOEL JUNE 29, 2014



Facebook revealed that it had altered the news feeds of over half a million users in its study.

Karen Bleier/Agence France-Presse — Getty Images

To [Facebook](#), we are all lab rats.

Facebook routinely adjusts its users' news feeds — testing out the number of ads they see or the size of photos that appear — often without their knowledge. It is all for the purpose, the company says, of creating a more alluring and useful product.

But last week, Facebook revealed that it had manipulated the news feeds of over half a million randomly selected users to change the number of positive and negative posts they saw. It was part of a psychological study to examine how emotions can be spread on social media.

Discussion Session This Week

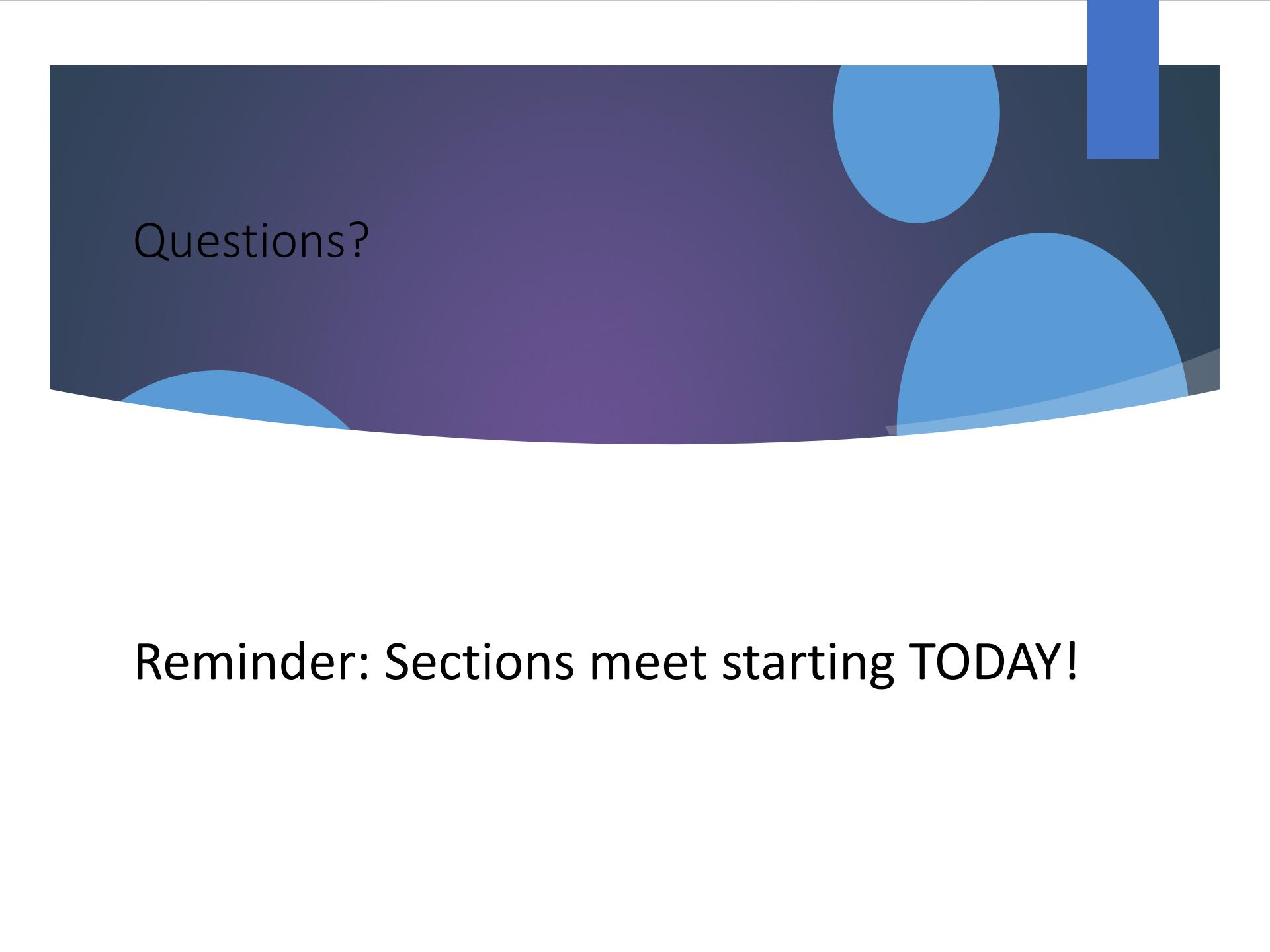
- Link to discussion guide on website
 - Please read it and come prepared!
- This week will be shorter than normal
 - Introductions and discussion of expectations (ours, and yours!)

Reading for Next Week

- Monday
 - Reading
 - "Medical Devices: The Therac-25" by Nancy Leveson
 - Quinn 8.5
 - Optional readings
 - NYT article
 - "Incident reporting and learning in radiation oncology"
 - Think about the people
 - What did they do?
 - What should they have done?
 - What pressures are they under?
- Wednesday
 - Reading
 - Let's get writing
 - Historical Perspectives on Argumentation. 3 sections: Classical, Toulmin, Rogerian

First Assignment

- Therac and the Boeing 737 Max
 - Due Feb 1st



Questions?

Reminder: Sections meet starting TODAY!