

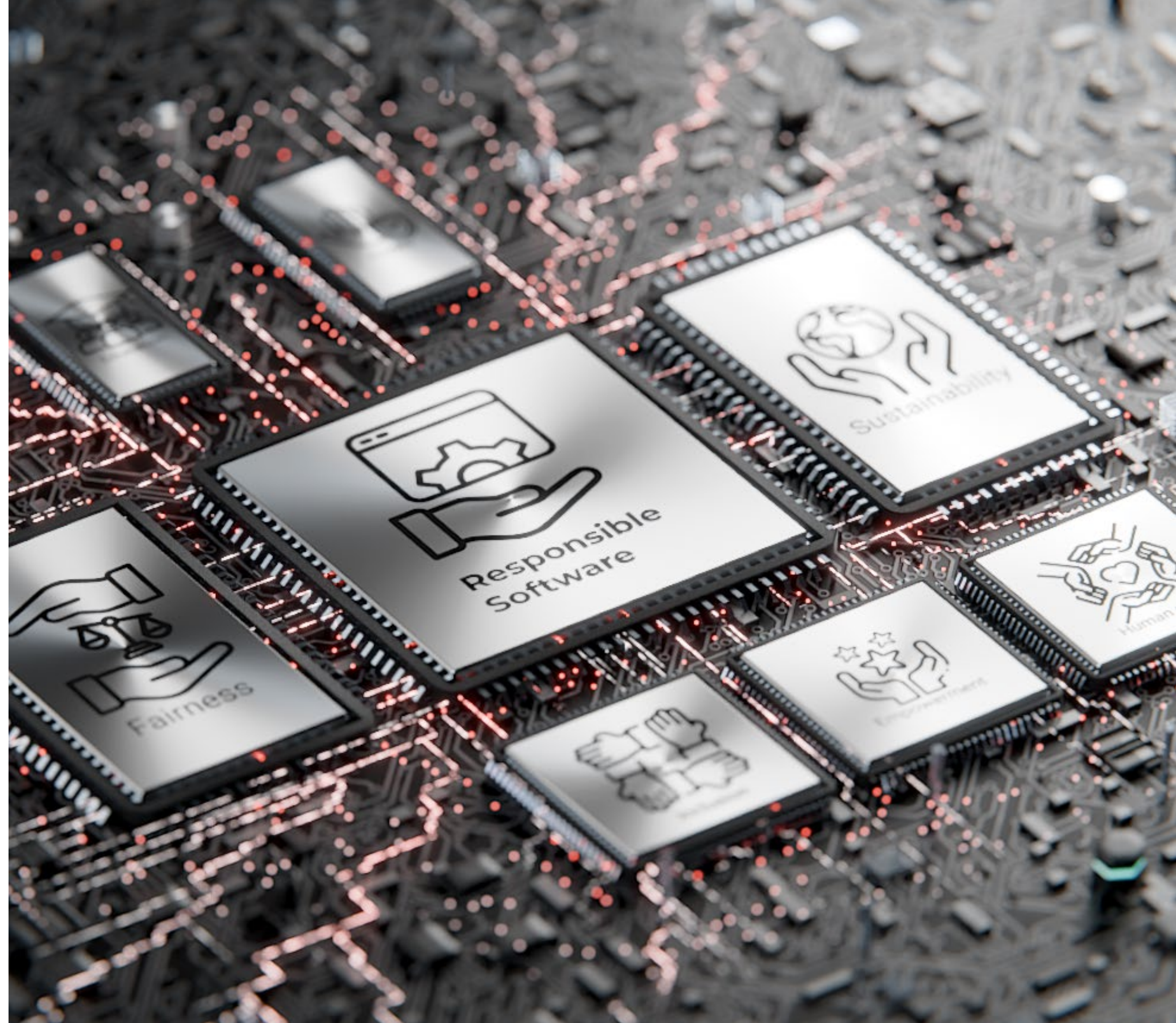


# Fairness 1 Review & Case studies

7 oct.

Cécile Hardebolle

**Responsible  
Software**





# Agenda for today

---

## 1. Graded assignment 1:

- a) Logistics
- b) Test the submission process

## 2. Interactive review questions on Fairness 1

## 3. Case studies:

- a) Analyzing values
- b) Inclusive design

# Graded assignment 1: logistics

---

You will be **assigned a seat** in a computer room, communicated this week on moodle

- If you see an issue with the seat you are assigned, please contact me!
- Make sure to display your camipro card on your table

The assignment will start at **8h15** and you have **1h30** in total, except special arrangements

## ■ **Distribution of the assignment:**

you will find it directly into your noto workspace

## ■ **Submission of the assignment:**

you will use moodle 👉 let's test that now!

# Assignment submission test

---

## 1. Go to noto:

make sure you have your CS-290 notebooks in your workspace!

- If necessary, find the moodle link for Fairness 1

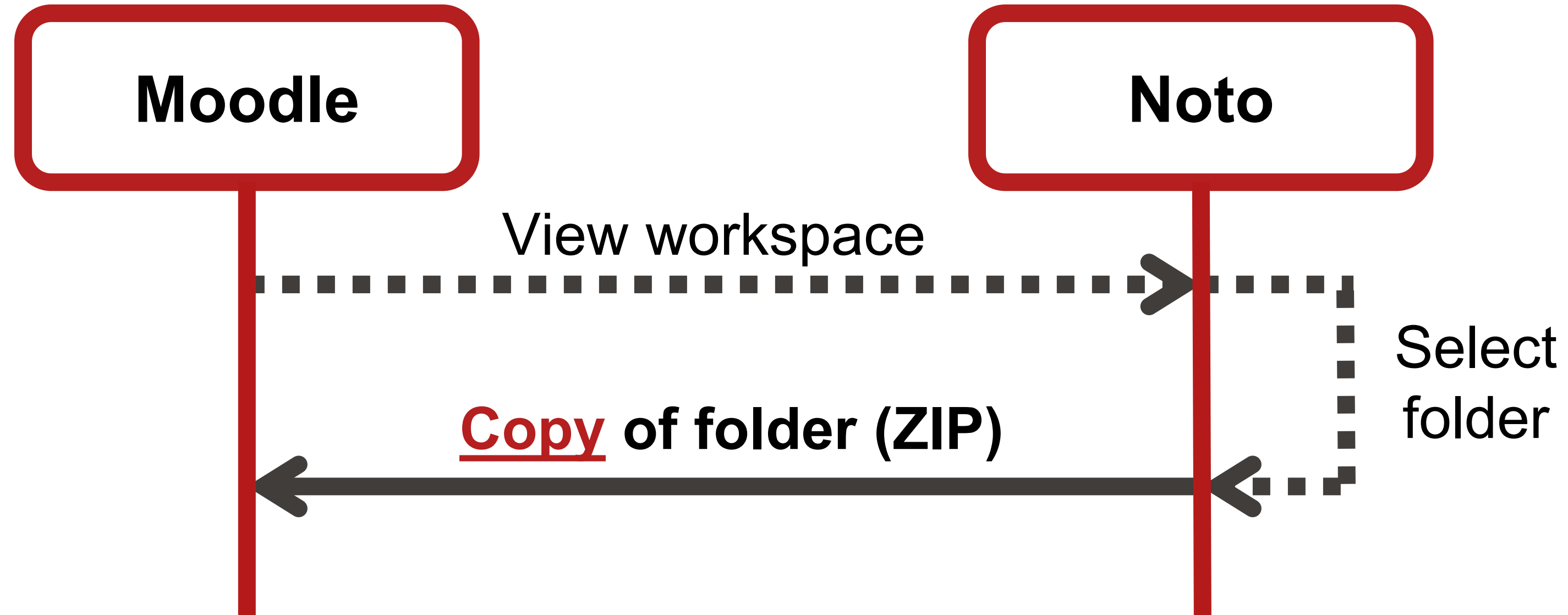
## 2. Go to moodle:

- Find the assignment “Test the submission process” in the Fairness 1 section
- Click on it, add a submission
- Select the **folder** Fairness 1 from noto
- Save changes

For those who have technical issues to access their notebooks on noto: a fix is under way, we will keep you informed with a post on Ed.

# How does it work?

---



- The copy on moodle is the reference for grading
- After submission, changes on noto are NOT reflected on moodle unless you resubmit

# **Review questions**

## **Fairness 1**

# Attributes - 1

URL: ttpoll.eu  
Session ID: cs290

**Hair color as an attribute to represent people is:**  
(select all that apply)

- ☒ 24% a. A sensitive attribute
- ☒ 10% b. A protected attribute
- ☒ 32% c. An observed variable
- ☐ 5% d. A latent variable
- ☐ 17% e. An objective representation of people
- ☒ 13% f. A subjective representation of people

What someone sees as “red” can be described as “auburn” by someone else, we would need to use a set of predefined categories, and some cases would be difficult to fit in (there is the same issue with skin color by the way)  
-> the only way to make it “objective” would be to measure the color with colorimetry

# Attributes - 2

URL: ttpoll.eu  
Session ID: cs290

Let's imagine a software that relies on SAT scores (standardized test for university admission in the US) to make recommendations of when to approve study loans.

**The SAT score is a \_\_\_\_\_ attribute.**



18%

a. Sensitive



11%

b. Protected

7%

c. Private

2%

d. Public



57%

e. Proxy

5%

f. System

Article on SAT scores' correlation with race:  
<https://www.brookings.edu/articles/race-gaps-in-sat-scores-highlight-inequality-and-hinder-upward-mobility/>



# Bias - 1

URL: ttpoll.eu  
Session ID: cs290

The city of Lozhann decides to deploy a smartphone app that allows residents to report potholes throughout the city to help with the identification of repair needs.

Article on biases in pothole reporting:  
<https://www.autovision-news.com/industry/ai-bias-pothole-detection/>

**The data collected by the app will probably exhibit:**  
(select all that apply)



23%

a. Preexisting bias

10%

b. Confirmation bias



27%

c. Representation bias



37%

d. Measurement bias

3%


e. Automation bias



# **Case studies**

# Where to find the cases?

---

1. Go to **moodle**
2. Find the **link to the case studies** for today: **Fairness 1**  
 this link will send you to courseware  
(where you can find all the course material)
3. Download:
  - The **instruction sheet**
  - 2 cheatsheets: Value Analysis, Inclusive Design
  - 1 template

# **Value Analysis**



# Part 1 – Your own values

---

1. **Fill the “own values questionnaire”** (template / appendix 1.1)
2. Discuss with your neighbor: what are your conclusions about the nature of values?

# Part 2 – Values manifested in products

---

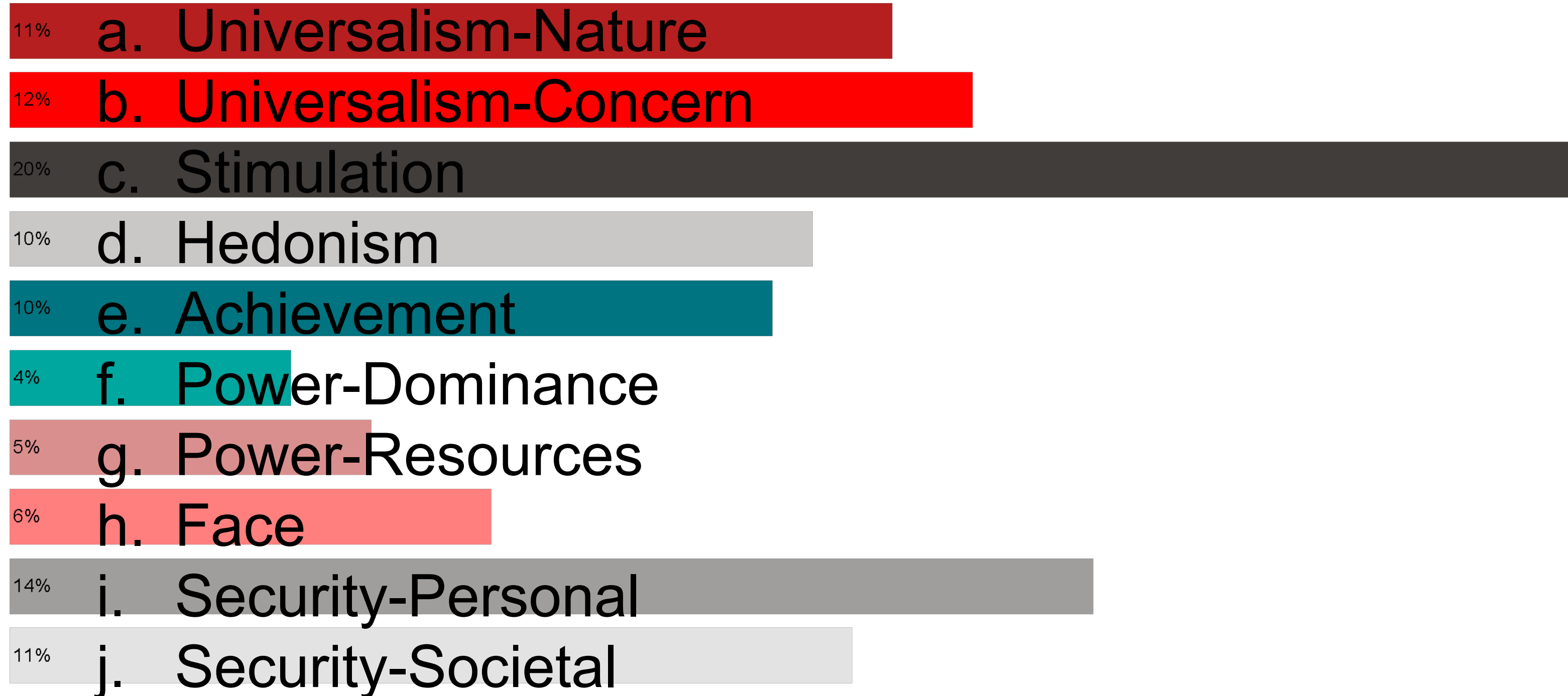
**Individually, fill out the Artifact Values Questionnaire for Google Maps (template / appendix 1.2):**

- Look at the advertisement website  
<https://google.com/intl/en/maps/about>
  - Explore the different features of Google Maps in a web browser (use a private window).
1. Indicate which values are visible
  2. Indicate how they manifest

# Values in Google Maps

URL: [ttpoll.eu](http://ttpoll.eu)  
Session ID: cs290

Select the values you have identified among these:



# Part 3a – Stakeholder values

---

- 1. Read the stakeholder description
- 2. For each stakeholder, identify 2 values that you can relate to Google Maps
- 3. Specify whether they are benefited or harmed by Google Maps and how in the table:

Stakeholder	Key values	Manifested	Benefits	Harms



# Part 3b – Value tensions

---

Draw the value tension map:

1. Place the values
2. Add the stakeholders concerned and indicate if it's a harm (red) or benefit (green)
3. Add lines to indicate the value tensions i.e., harm vs. benefit

They can be:

- ◆ Between different stakeholders or for the same stakeholder
- ◆ Between values or for the same value

# Overall debriefing of the strategy

---

- Products are not neutral: they embed and manifest values
- **Stakeholders have values,**  
**which may be harmed or supported by products**  
👉 Value tensions help identify how the design of a product may negatively affect some stakeholders
- It can happen that some value conflicts cannot be resolved
  - Identify core values and redlines
  - Analyze tradeoffs

# Inclusive Design

We will go back to this case next week.

**What's next?**



# Indicative evaluation

---

- The feedback system is open until midnight Sunday 13 October
  - 👉 log on ISA
  - Single question: “The running of the course enables my learning and an appropriate class climate”
  - Field for comments
- **Your feedback is important to improve the course!**
  - It is collected early so we have a chance to adjust what can be adjusted this year
  - Your comments are appreciated!

# We start Fairness 2!

---

Tomorrow, Tuesday 8: notebook on recidivism risk prediction

By Monday 15:

- Watch **videos 4.1 to 4.5** + do the **quizzes**
- Finish the notebook  
(and any other leftover from previous weeks)