Blockchains & looking at CW1.1

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What we will do today

• Look at how you did in CW1.1
• Questions from your prep work
• Designing with blockchain
• Ethics of blockchain
• Prep work for next week
Looking at CW1.1
Let's jump straight into Miro!

https://miro.com/app/board/uXjVNULU5bl=/?share_link_id=121890719720
Activity 1!: 20 minutes

In the Miro …

1. Read the example your group has been assigned
2. After reading it, add feedback via post-its (green for “this is good”, orange for “this could be better”). Things to consider:
   • Is the writing clear?
   • Does the example make it obvious what the papers are about that are being reviewed?
   • Are the approaches to design in the papers described clearly?
   • Does the example compare and contrast the approaches taken in the paper?
   • Are the references in the correct format?
Some broad feedback from me…

• Make sure to introduce what you are writing about, even for short assignments!
• Be careful about making sweeping statement and un-referenced claims, e.g.:

“In terms of reliability, both papers show a high relevance to the topic but the publication time is not modern enough. Paper 1 was published before the 2000s' which lowers its reliability.”

• Use the reference format if you are given one, e.g.:


• Use the template if you’re given one!!!!
Questions for this week

68% submission (quite down but …)

Approx. 7200 words (... so much!)
OMG blockchain blows my mind I still can’t understand how it works or what it is!

Student question!
Some easy intros

https://youtu.be/ZE2HxTmxfrI

https://youtu.be/FkUn86bH34M?t=26
How can design and human-computer interaction researchers contribute to blockchain developments?
HCI and Blockchain

Making Sense of Blockchain Applications: A Typology for HCI

Christopher Crease, Acta Madouwy, Jo Bridge, Mike Harding, Chris Speed, John Vines

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ABSTRACT
Blockchain is an emerging information technology. This paper is proposed to fundamentally transform the ways in which people connect, work, collaborate, organize and identify themselves. In this paper, we present a typology of emerging blockchain applications. We consider the contexts in which these are applied, and identify five themes: 

- Biases in datasets
- Excluded user groups
- Tools for regulators

Methods for co-design:

- Develop applications with more diverse users
- Techniques to help non-experts understand the technology

Designing blockchain interfaces:

- More usable e-wallets
- Creating smart contracts
- Tracing the histories of digital property

Expanding imagination of applications:

- Creating more provocative systems
- Identifying use cases with more diverse users

Studying the ethical implications of blockchain apps:

- Biases in datasets
- Excluded user groups
- Tools for regulators
Take a break!
Back at 16:10
Designing with Blockchain
An introduction to blockchain and smart contracts

6 case studies of designing from, with, through blockchain
Design and blockchains

A quick poll: Head to Teams....
Let’s go back to Miro...

https://miro.com/app/board/uXjVNUlU5bI=/?share_link_id=121890719720
Activity 2!: 20 minutes

Step 1 - Go to the box for the paper you read

Step 2 - Complete 5 post-its that capture 5 different "insights" from the paper you read. Focus on insights about blockchain, smart contracts, or data-driven systems

Step 3 - Make sure your post its are the correct colour!

Step 4 - Drag all of your post its into this central canvas

Step 5 - Start to read the post its of others

Step 6 - After reading post its for a while, start to cluster them together

Step 7 - Are you starting to see "themes" or categories of clusters appear? If so... start to add comments on them to capture these.
What are the ethical issues of blockhains?
Reminder: our simple ethical framework...

<table>
<thead>
<tr>
<th>Choices &amp; decisions</th>
<th>Implications</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Social</td>
</tr>
<tr>
<td>Design process</td>
<td></td>
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<tr>
<td>Interface design</td>
<td></td>
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<tr>
<td>Data gathering &amp; use</td>
<td></td>
</tr>
<tr>
<td>Model development &amp; use</td>
<td></td>
</tr>
<tr>
<td>Openness &amp; transparency</td>
<td></td>
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</tbody>
</table>
"... the rise of blockchain and smart contracts facilitates the functions of a city to be expressed as a number of licences to provide services which can be auctioned off to citizens, companies or organizations, (e.g. parking, housing, energy etc). In practice, the city depends upon a set of distributed autonomous organizations (or DAOs) that run these licensing programmes themselves, administering these temporarily granted rights and cryptocurrency payments on a blockchain."

The Energy Consumption of Blockchain Technology: Beyond Myth

Johannes Sedlmeir · Hans Ulrich Buhl · Gilbert Fridgen · Robert Kellex

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Abstract When talking about blockchain technology in academia, business, and society, frequently generalizations are still heard about its – supposedly inherent – enormous energy consumption. This perception inevitably raises concerns about the further adoption of blockchain technology, a fact that inhibits rapid uptake of what is widely considered to be a groundbreaking and disruptive innovation. However, blockchain technology is far from homogeneous, meaning that blanket statements about its energy consumption should be reviewed with care. The article is meant to bring clarity to the topic in a holistic fashion, looking beyond claims regarding the energy consumption of Bitcoin, which have, so far, dominated the discussion.

Keywords Blockchain · Cryptocurrency · Energy consumption · Distributed ledger technology · Sustainability

1 Introduction
Blockchain technology entered public awareness with its first application, the cryptocurrency Bitcoin (Nakamoto 2008), which was established in 2009 and currently exhibits a market capitalization of more than 100 billion USD. In the last decade, blockchain technology has developed significantly and is now implemented in a wide range of scenarios, including Ethereum or Hyperledger Fabric, which allow distributed platforms to function with

https://doi.org/10.1007/s12599-020-00656-x
What is the right to be forgotten?

The right to be forgotten appears in Recitals 65 and 66 and in Article 17 of the GDPR. It states, “The data subject shall have the right to obtain from the controller the erasure of personal data concerning him or her without undue delay and the controller shall have the obligation to erase personal data without undue delay” if one of a number of conditions applies. “Undue delay” is considered to be about a month. You must also take reasonable steps to verify the person requesting erasure is actually the data subject.

The right to be forgotten dovetails with people’s right to access their personal information in Article 15. The right to control one’s data is meaningless if people cannot take action when they no longer consent to processing, when there are significant errors within the data, or if they believe information is being stored unnecessarily. In these cases, an individual can request that the data be erased. But this is not an absolute right. If it were, the critics who argue that the right to be forgotten amounts to nothing more than a rewriting of history would be correct. Thus, the GDPR walks a fine line on data erasure.
Issue #4: Lack of Regulation

Bitcoin paradise? Briton creates ‘crypto utopia’ in South Pacific

Anthony Welch and partner try to woo cryptocurrency investors to regulation-free island on Vanuatu archipelago

Vanuatu is a South Pacific Ocean nation made up of approximately 80 islands. Photograph: Westend61/Getty Images


What other applications of blockchain are there that are not just cryptocurrencies or NFTs?
Blockchains for social and public good

https://op.europa.eu/en/publication-detail/-/publication/8be60290-0d00-11eb-bc07-01aa75ed71a1/language-en
Blockchain and Sustainable Development .......??

https://medicalchain.com/en/

http://the-incredible-machine.com/fairbike.html

https://os.university/

https://www.provenance.org/
Tasks for the next 7 days:

1. Your prep work for next week’s lecture
   i. Watch this!: https://youtu.be/XuwP5iOB-gs?si=cycwUVL7-JFqaorm
   ii. And this!: https://youtu.be/ppPLDEi82lg?si=Mg6uiRdBTV_FNaC4
   iii. And this… (not on robots, but a critical take on technology for “elder” care!): https://youtu.be/Ear8W-C96bk?si=gmpJaCCD2YU1WMAf

2. Complete your Class Notebook submission in MS Teams:
   i. Write 3 reflections from last week’s prep work and today’s lecture – what did you learn (go beyond what you wrote last week)?
   ii. Write 2 questions you have based on the prep work for us (John and Susan) to consider for our lecture next week.
   iii. Write 1 comment – something you have learned, are intrigued by, something related to your background and interests – prompted by the prep work.
Reminder ....

1. Tutorials!
   i. This week – another opportunity to explore a different case study in more detail looking at the social, environmental and legal implications of new technologies.

2. Mentoring meetings with Adv MSc DI students!
   i. Opportunity to talk with experienced students to get feedback on your ideas for CW1.2
Any questions?

If you have any questions about this week’s lecture, contact me at:
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