Data and Society

Lecture 10: Privacy, Anonymity, Cryptocurrency

4/22/16
Announcements

• Op-Eds due April 29 before class
• Section 3 Exam May 6
• 2 slots left for DRT “do-overs”
• If you are interested in **working with RDA** this summer, let me know (paid position). We need a student who is:
  – A good writer and communicator
  – Self-driven
  – Able to work well collaboratively
  – Data-aware
Today (4/22/16)

• Lecture 10: Privacy, Anonymity and Cryptocurrency

• Digital Political Issues Forum
## Section 1: The Data Ecosystem - Fundamentals

<table>
<thead>
<tr>
<th>Date</th>
<th>Event Description</th>
<th>Facilitator &amp; Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>January 29</td>
<td>Class introduction; Digital data in the 21\textsuperscript{st} Century (L1)</td>
<td>Data Roundtable / Fran</td>
</tr>
<tr>
<td>February 5</td>
<td>Data Stewardship and Preservation (L2)</td>
<td>L1 Data Roundtable / 5 students</td>
</tr>
<tr>
<td>February 12</td>
<td>Data-driven Science (L3)</td>
<td>L2 Data Roundtable / 5 students</td>
</tr>
<tr>
<td>February 19</td>
<td>Future infrastructure – Internet of Things (L4)</td>
<td>L3 Data Roundtable / 5 students</td>
</tr>
<tr>
<td>February 26</td>
<td>Section 1 Exam</td>
<td>L4 Data Roundtable / 5 students</td>
</tr>
</tbody>
</table>

## Section 2: Data and Innovation – How has data transformed science and society?

<table>
<thead>
<tr>
<th>Date</th>
<th>Event Description</th>
<th>Facilitator &amp; Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>March 4</td>
<td>Paper assignment description</td>
<td>Section 1 Data Roundtable / 5 students</td>
</tr>
<tr>
<td>March 11</td>
<td>Data and Health: Phil Bourne guest lecture (L5)</td>
<td>Section 2 Data Roundtable / 3 students</td>
</tr>
<tr>
<td>March 18</td>
<td>Spring Break / no class</td>
<td></td>
</tr>
<tr>
<td>March 25</td>
<td>Data and Entertainment (L6)</td>
<td>Section 2 Data Roundtable / 5 students</td>
</tr>
<tr>
<td>April 1</td>
<td>Big Data Applications (L7)</td>
<td>Privacy Panel / 6 students</td>
</tr>
</tbody>
</table>

## Section 3: Data and Community – Social infrastructure for a data-driven world

<table>
<thead>
<tr>
<th>Date</th>
<th>Event Description</th>
<th>Facilitator &amp; Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>April 8</td>
<td>Data in the Global Landscape (L8)</td>
<td>L7 Data Roundtable / 5 students</td>
</tr>
<tr>
<td>April 15</td>
<td>Digital Rights in the U.S. (L9)</td>
<td>L8 Data Roundtable / 5 students</td>
</tr>
<tr>
<td>April 22</td>
<td>Bulent Yener: Review of Privacy, Anonymity, and Cryptocurrency (L10)</td>
<td>Digital Rights Forum / 5 students</td>
</tr>
<tr>
<td>April 29</td>
<td>Digital Governance and Ethics (L11)</td>
<td>L10 Data Roundtable / 5 students</td>
</tr>
<tr>
<td>May 6</td>
<td>Section 3 Exam</td>
<td>L11 Data Roundtable / 5 students</td>
</tr>
</tbody>
</table>
Bulent Yener – Professor in CS and Director of the Data Science Research Lab

• Research expertise:
  – Bioinformatics and Medical Informatics
  – Security, Privacy, and Intelligence Informatics
  – Wireless Networks
  – QoS and VPNs
  – Overlay Networks
  – Internet Measurements
Data Roundtable
Total Grade Percentages So Far
DRT1 + E1 + P + CP (+ DRT2)
Data Roundtable May 6


• “The Ethical Data Scientist”, Slate, http://www.slate.com/articles/technology/future_tense/2016/02/how_to_bringer_better_ethics_to_data_science.html (Dan L.)

Data Roundtable: April 29


- “Does the U.S. Need a Legal Right to be Forgotten?”, Huffington Post, http://www.huffingtonpost.com/brad-reid/does-the-us-need-a-legal_b_9659746.html (James B.)


- “Led Zeppelin’s Stairway to Heaven may be partly Stolen”, The Guardian, http://www.theguardian.com/music/2016/apr/12/stairway-to-heavens-opening-chords-may-have-been-stolen-judge-says (Levin H.)
April 22 Forum: Where do/could the Candidates Stand?
Questions/topics from the Electronic Frontier Foundation
https://www.eff.org/deeplinks/2016/02/putting-digital-rights-spotlight-2016

• **EFF Questions/Topics for the Presidential Candidates (Clinton, Cruz, Kasich, Sanders, Trump)**
  – Each student takes a topic; talks for 7 minutes and answers questions for 5 minutes
  – In your talk,
    • Describe the topic and the issues in some detail
    • Describe the views of the candidates based on whatever information you can obtain or infer.
  – Each student also writes a 3-4 page review on the area and the candidates’ views and turns it in on April 22

• **Topics (continued on next slide) – each student do only one**

  – **Surveillance** (Ethan B.)
    • What are your views regarding further restrictions on domestic surveillance to [finish the job that Congress started](https://www.eff.org/deeplinks/2016/02/putting-digital-rights-spotlight-2016) with the USA Freedom Act?
    • What are your views regarding the authority for domestic NSA surveillance under [executive order 12333](https://www.eff.org/deeplinks/2016/02/putting-digital-rights-spotlight-2016), which was announced in 1981 to authorize foreign intelligence collection but revealed in 2013 by a State Department whistleblower to have been frequently cited as a legal basis for secret domestic surveillance?

  – **Privacy**
    • Where do you stand regarding efforts by intelligence agencies to [undermine encryption tools](https://www.eff.org/deeplinks/2016/02/putting-digital-rights-spotlight-2016), such as the [FBI's demands of Apple](https://www.eff.org/deeplinks/2016/02/putting-digital-rights-spotlight-2016)?
    • What are your views regarding efforts to update the [Electronic Communications Privacy Act](https://www.eff.org/deeplinks/2016/02/putting-digital-rights-spotlight-2016) to reflect recent reforms already adopted in states including [California](https://www.eff.org/deeplinks/2016/02/putting-digital-rights-spotlight-2016)?
April 22 Forum: Where do/could the Candidates Stand?

Questions/topics from the Electronic Frontier Foundation  
https://www.eff.org/deeplinks/2016/02/putting-digital-rights-spotlight-2016

• The Trans-Pacific Partnership (TPP) (Evan F.)
  – Do you support the proposed TPP agreement? Why or why not?
  – The TPP text was finally posted online after more than five years of negotiations. What are your views regarding whether to make trade agreements more transparent and democratic?

• Open access (Aima M.)
  – Through various departmental grant programs, our federal government funds billions of dollars’ worth of grants intended to benefit the public. Do you think that federally funded research, educational materials, and cultural works should be made freely available to the public? Why or why not?
  – What are your views regarding federal mandates requiring open licensing for federally funded content?

• Copyright (Theo B.)
  – Looking forward, one of the most crucial digital freedom issues is: who will control the hardware in your home, in your pocket, and in your own body. Will you work to protect consumers' right to circumvent access controls on products they own and otherwise defend our freedom to tinker, repair, re-use and modify our stuff?
  – Section 1201 of the Digital Millennium Copyright Act forbids users from breaking DRM (digital rights management) on works subject to copyright, even if the purpose is a clearly lawful fair use. What are your views regarding reforms to address this issue?

Patent reform (Aesa K.)
  – Would you endorse a comprehensive patent litigation reform bill to protect innovators from patent trolls?
  – Would you endorse a venue reform bill, making it more difficult for parties in patent suits to shop for favorable forums?

• Transparency
  – What are your views regarding whistleblowers who risk their careers to expose secret information important to the public interest?
  – Under your administration, will there be consequences for intelligence officials who mislead Congress in response to direct questions at oversight hearings, or for agencies that misuse technology to cover up crimes, like when the CIA hacked into Congressional files to steal evidence of international human rights abuses?