

CSE 510: HCI
Spring 2010
Project final presentation

Instance Based Social Network Representation

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Amit Levy

Instance Based Network Representation

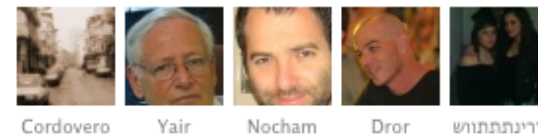
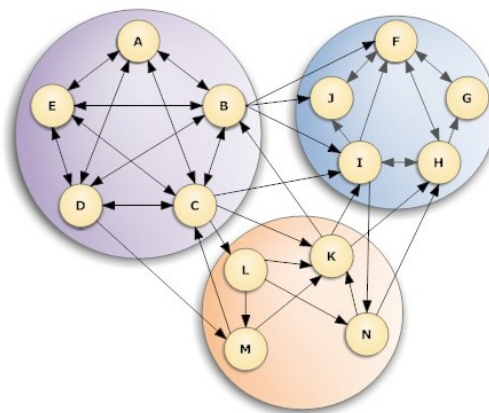
Graph representation

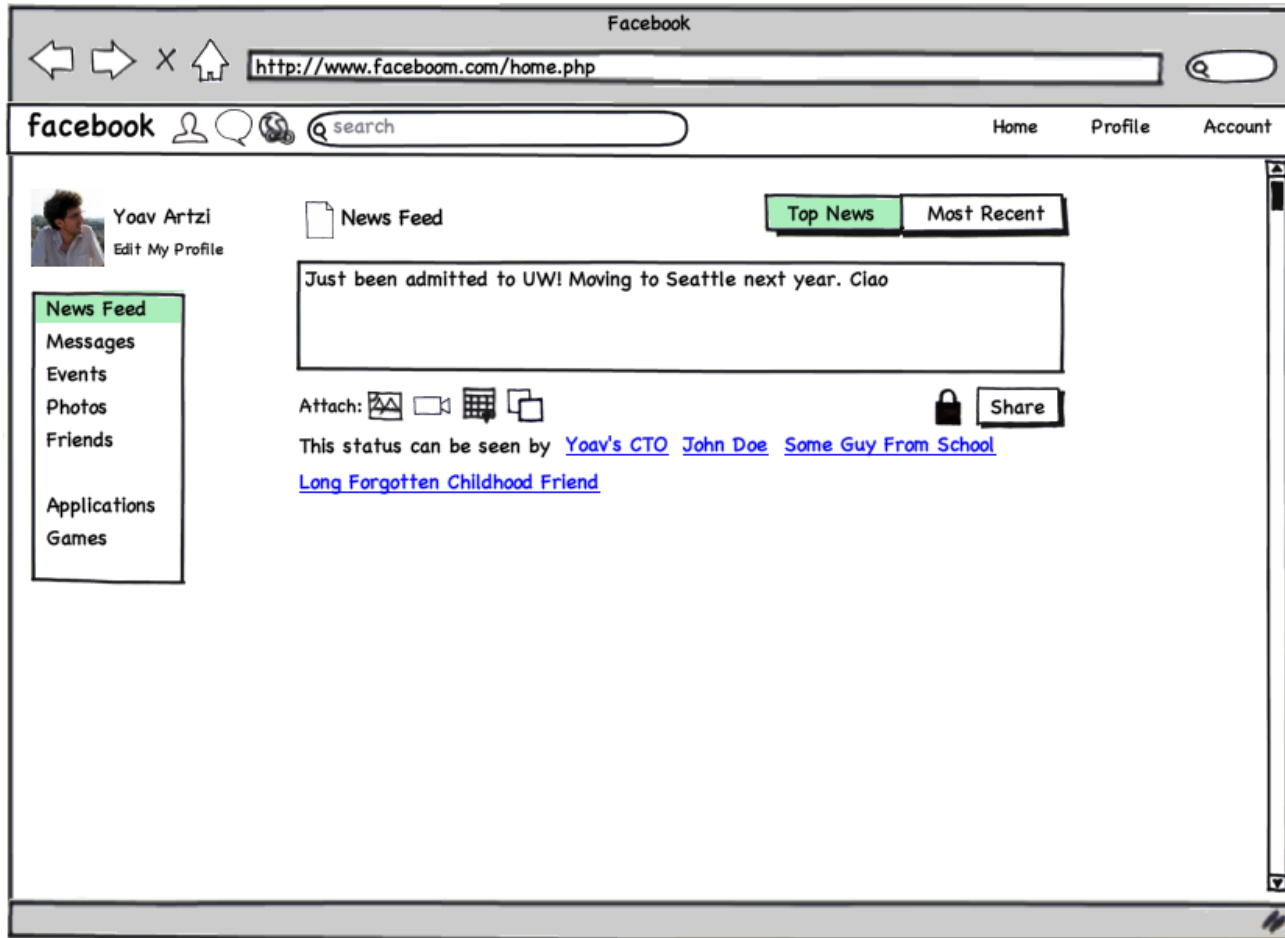


Community detection

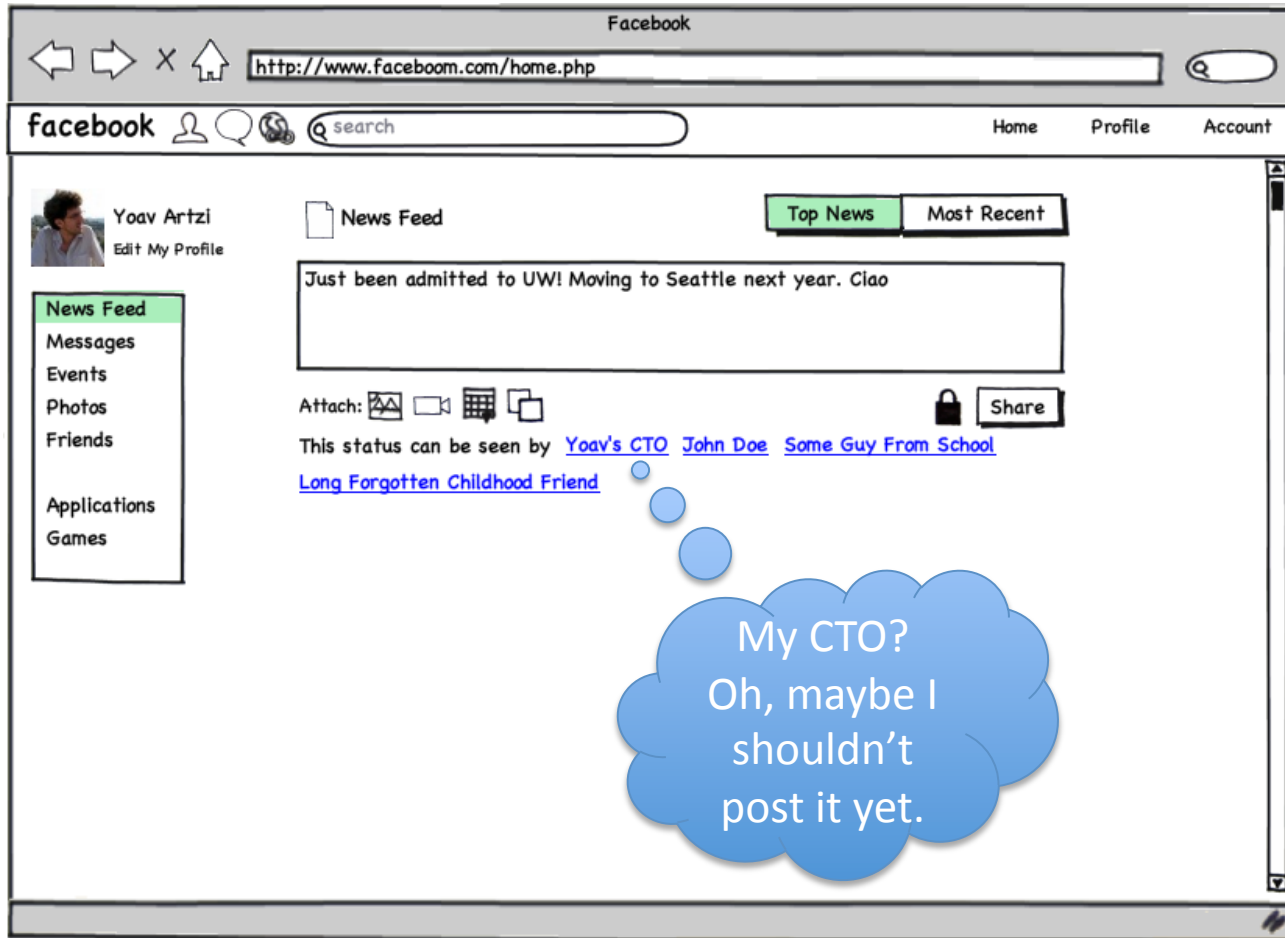


Representing instances detection





*This may or may not really happened



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Challenges

- How to answer the central question?
- Too many dimensions
- Respect people's privacy
- Only a few chances to get it right

Approach





- Ask user to associate individuals with clusters
- Answering a higher level question
 - How do users intuitively perceive their network?
- Evaluate if algorithm captures user's perception of their social network


Our Experiment

Community Detection

Is the friend on the bottom related to a group represented by any of the friends on the top row?





[Yes](#) [No](#)


 Ori Bankhalter  Anastasiya Shapochkina  Nicki Dell  Kelly Teh

 Dan Ben-Yaacov

Community Detection

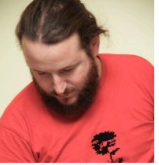
Please click on the friend in the top row to which you think the friend on the bottom is most closely related, or click "None" if none of them seem right.




 [Julija Lazutkaite](#)  [Erez Makavy](#)  [Ori Bankhalter](#)  [Anastasiya Shapochkina](#) [None](#)




 Tami Eshed




Community Detection

Of the 9 friends below, which are related to the group represented by Ori Bankhalter?
(You may select multiple friends or none. Click "Submit" at the bottom when you are done choosing)

 Ori Bankhalter

 Noa Vesely  Eli Grossman  Anastasiya Shapochkina

 Hepi Blue  Lindsey Kerr  Ronen Pinko

 Jana Verge  Nicki Dell  Laia Senserrich

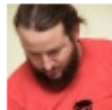
- 3 question types
- Composed using the user's Facebook network
- User gets 10 questions of a single type

Our Experiment

Community Detection

Is the friend on the bottom related to a group represented by any of the friends on the top row?

[Yes](#) [No](#)



Ori Bankhalter



Anastasiya Shapochkina



Nicki Dell



Kelly Teh



Dan Ben-Yacov

Our Experiment

Community Detection

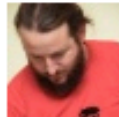
Please click on the friend in the top row to which you think the friend on the bottom is most closely related, or click "None" if none of them seem right.



[Julija Lazutkaite](#)



[Erez Makavy](#)



[Ori Bankhalter](#)



[Anastasiya Shapochkina](#)

[None](#)



Tami Eshed

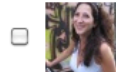
Our Experiment

Community Detection

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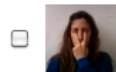
Ori Bankhalter



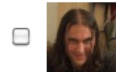
Noa Vesely



Hapi Blue



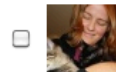
Jana Verge



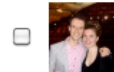
Eli Grossman



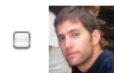
Lindsey Kerr



Nicki Dell



Anastasiya Shapochkina



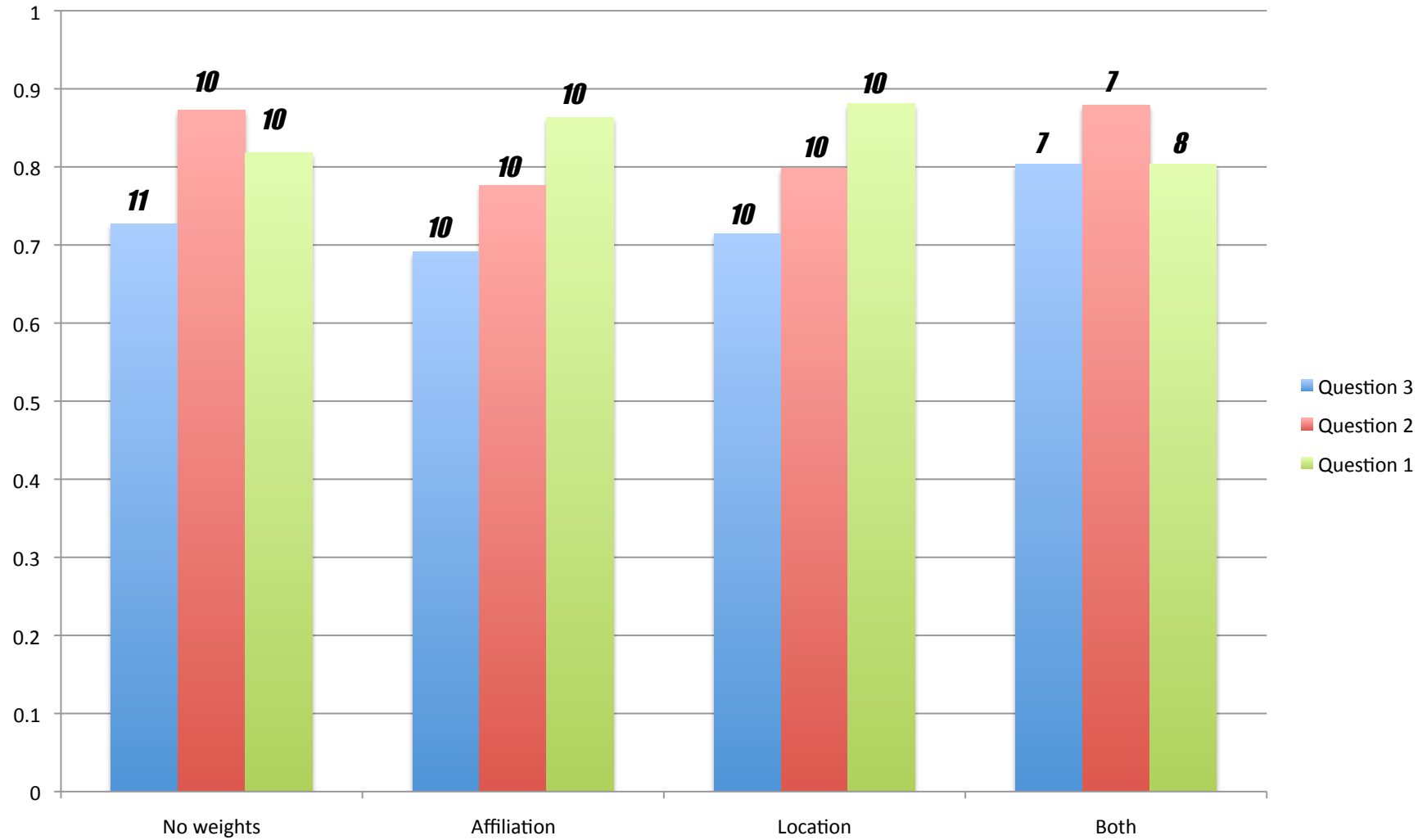
Ronen Pinko



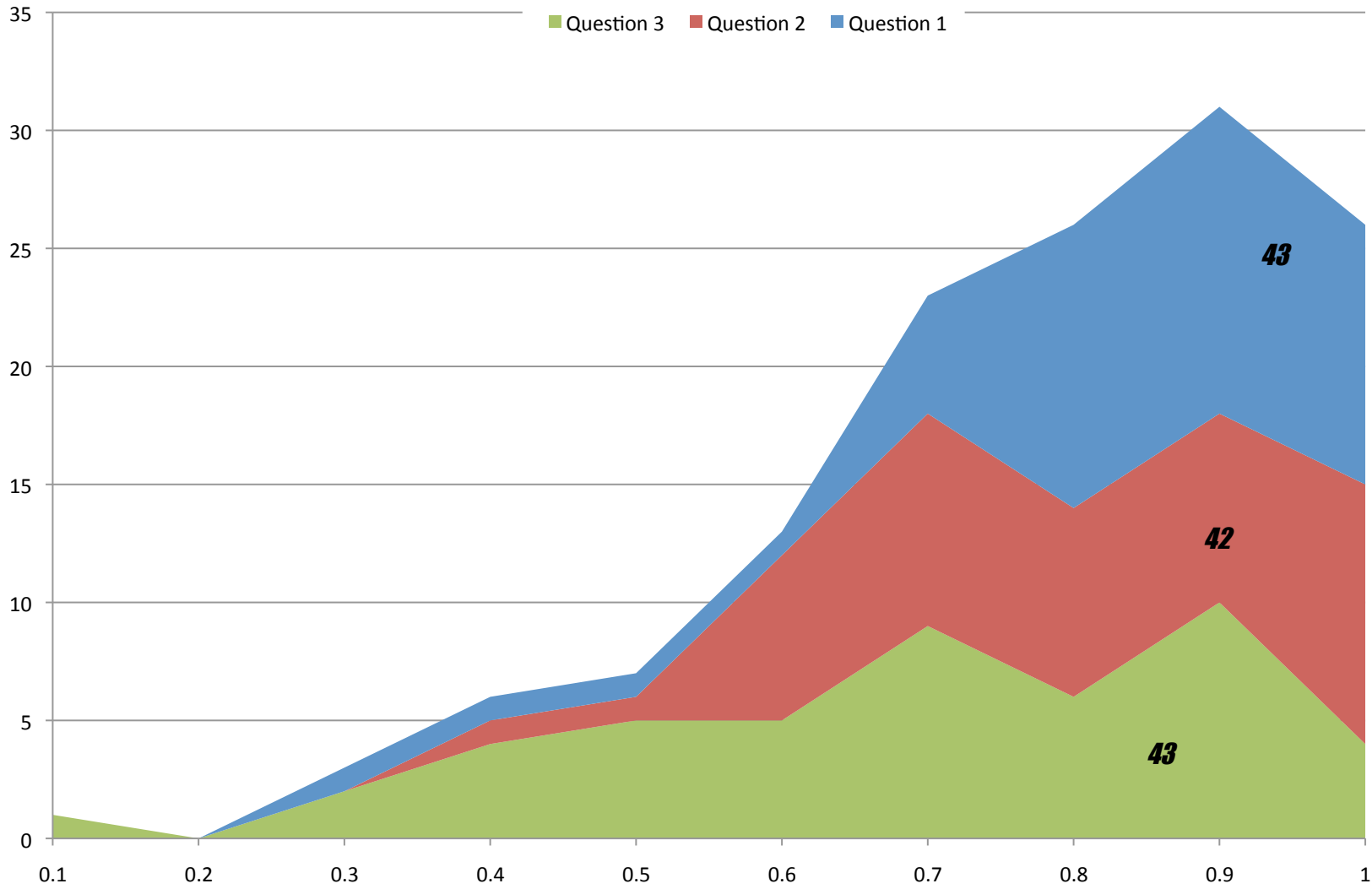
Laia Senserrich

Submit

Results



Results



Limitations

- Selection bias
- Could not cover all variables
 - Representation algorithms left out
 - Binary use of affiliation and location
- Limited data for analysis
 - For example, no friend count, only mutual friends, interactions, etc

What We Learned

- Quiz-like possibilities for privacy configuration

“... it was really fun for me, this little game...”

- Privacy matters and forgotten

“... scary, it brought up photos of friends that are accidentally in my Facebook... Is that the goal? To show that half of them are not really connected to you?”

What We Learned

- People are worried about privacy on Facebook
- They need to see who has access to their data
- Algorithmic approaches might help communicate privacy

Future Work

- More of the same (gather more data)
- Explore more personal variables
- Relating success to network properties
 - Size, path lengths, clustering co-efficient
- Use our approach to communicate privacy in Facebook
 - Evaluate “in the wild”
- Explore other uses of social network clustering
 - Help create groups for privacy settings