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NPTEL (<https://swayam.gov.in/explorer?ncCode=NPTEL>) » Privacy And Security In Online Social Media (course)



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Course outline

How does an
NPTEL online
course work?
()

Prerequisite
Assignment ()

Welcome to
PSOSM class
()

Introduction
to Social
Media API ()

Misinformation
and Privacy

Week 9 : Assignment 9

The due date for submitting this assignment has passed.

Due on 2023-09-27, 23:59 IST.

Assignment submitted on 2023-09-27, 22:43 IST

1) Which of the following is/are location-based services?

1 point

- ☒ Foursquare
- ☒ Yelp
- ☒ Gowalla
- ☒ Uber

Yes, the answer is correct.

Score: 1

Accepted Answers:

Foursquare

Yelp

Gowalla

Uber

2) What is the difference between Pearson and Spearman rank correlation?

1 point

Hint: https://en.wikipedia.org/wiki/Pearson_correlation_coefficient

(https://en.wikipedia.org/wiki/Pearson_correlation_coefficient)

()

Privacy and Pictures on Online Social Media ()

Policing and Social Media ()

E-crime and social media ()

Social media and ecrime ()

Identity resolution and social media ()

Research papers: Location based Privacy ()

● Week 9.1: Privacy in Location Based Social Networks Part 1 (unit? unit=63&lesson=64)

● Week 9.2: Privacy in Location Based Social Networks Part 2 (unit? unit=63&lesson=65)

● Tutorial 7: Visualization - Highcharts (unit?)

- ☒ Pearson correlation assesses linear relationships, while Spearman correlation evaluates monotonic relationships.
- ☐ Spearman correlation is always between -1 and 1, while Pearson correlation can have values outside this range.
- ☐ Spearman correlation is calculated using a formula involving the sum of squared differences, whereas Pearson correlation is based on the product of z-scores.
- ☐ All of the above

Yes, the answer is correct.

Score: 1

Accepted Answers:

Pearson correlation assesses linear relationships, while Spearman correlation evaluates monotonic relationships.

3) You have two datasets and want to measure the strength and direction of the relationship between them. One set of data consists of the ranks or ordinal values of the observations, while the other set consists of continuous numerical data. Which correlation coefficient is most appropriate for this scenario? **1 point**

- ☒ Spearman's rank correlation coefficient
- ☐ Pearson's correlation coefficient
- ☐ Either Spearman or Pearson correlation can be used interchangeably.
- ☐ None of the above because correlation coefficients are not applicable in this scenario.

Yes, the answer is correct.

Score: 1

Accepted Answers:

Spearman's rank correlation coefficient

4) Which of the following are open text fields, whose validity is not enforced by the system and may carry noise/invalid locations? **1 point**

- ☒ Venue location
- ☒ tips
- ☐ User home city
- ☐ done

No, the answer is incorrect.

Score: 0

Accepted Answers:

Venue location

User home city

unit=63&lesson=66)

● Quiz: Week 9 : Assignment 9 (assessment? name=139)

● Week 9 Feedback Form : Privacy and Security in Online Social Media (unit? unit=63&lesson=67)

Research Papers Part - II ()

Week 11: Summary ()

Lecture materials/Notes ()

Text Transcripts ()

Download videos ()

Books ()

Problem Solving Session - July 2023 ()

5) Which of the following is correct inference from Figure 2?

1 point

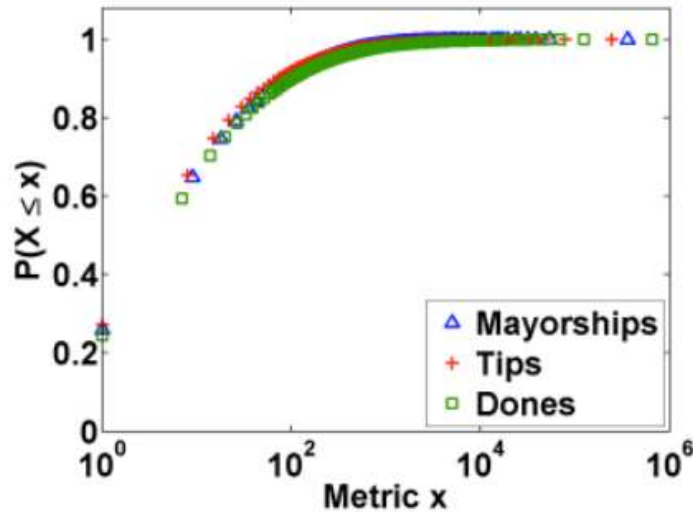


Figure 2. Cumulative Distribution of the Number of Mayorships, Tips and Dones per City.

- ☒ The distributions are very skewed, with a few cities having as many as 100 mayorships, tips or dones.
- ☐ The distributions are evenly balanced, with cities having a nearly equal number of mayorships, tips, or dones.
- ☐ The distributions are normally distributed, with no cities having an exceptionally high number of mayorships, tips, or dones.
- ☐ None of the above

Yes, the answer is correct.

Score: 1

Accepted Answers:

The distributions are very skewed, with a few cities having as many as 100 mayorships, tips or dones.

6) What is the key difference between a scatter plot and a bar chart?

1 point

- ☐ Scatter plots display categorical data, while bar charts are used for numerical data.
- ☒ Scatter plots show the relationship between two numerical variables, while bar charts display the frequency or distribution of categorical data.
- ☐ Scatter plots are only used for displaying data with a single variable, while bar charts can visualize data with multiple variables.
- ☐ All of the above

Yes, the answer is correct.

Score: 1

Accepted Answers:

Scatter plots show the relationship between two numerical variables, while bar charts display the frequency or distribution of categorical data.

7) Which of the following is publicly available data on Foursquare?

1 point

☒ Mayorships

☒ Tips

☒ Dones

☒ Checkins

No, the answer is incorrect.

Score: 0

Accepted Answers:

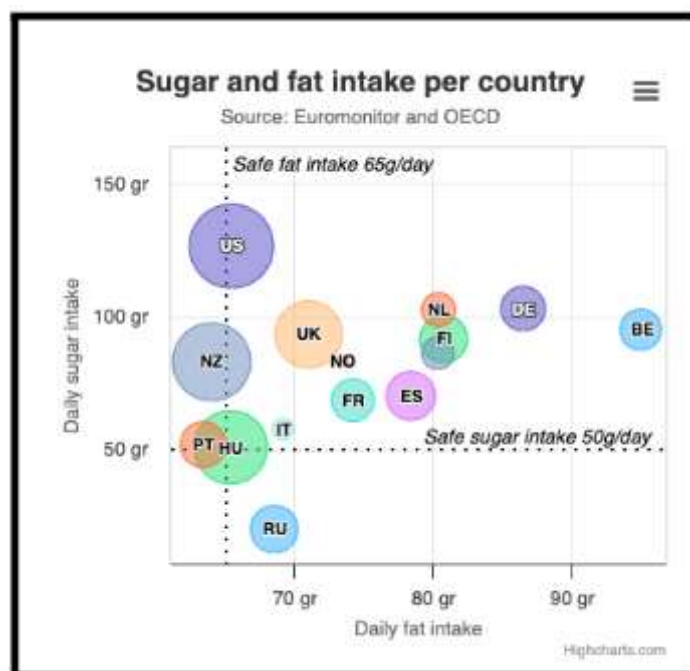
Mayorships

Tips

Dones

8) Which plot is shown in the below figure?

1 point



☐ Scatter plot

☐ Bar chart

☒ Bubble plot

☐ Histogram

Yes, the answer is correct.

Score: 1

Accepted Answers:

Bubble plot

9) What is the primary characteristic of Location-Based Social Networks (LBSNs)?

1 point

☐ They allow users to share text-based posts with their friends and followers.

☐ They provide a platform for online gaming and virtual reality experiences.

- ☒ They enable users to connect with others and share their physical locations and activities.
- ☐ They focus exclusively on professional networking and job searching.

Yes, the answer is correct.

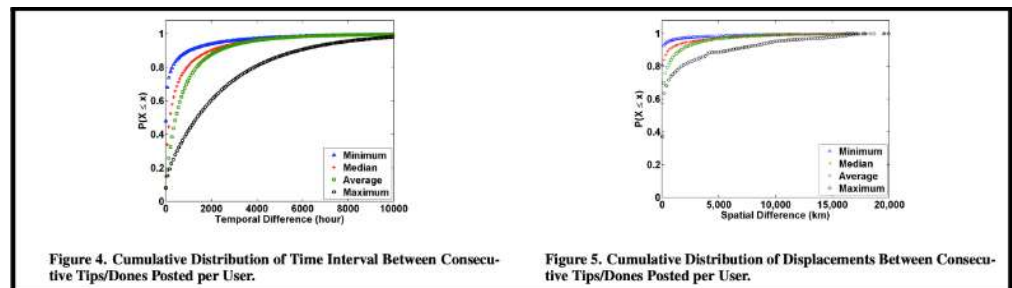
Score: 1

Accepted Answers:

They enable users to connect with others and share their physical locations and activities.

10) As discussed in lecture, Choose the correct inference (s) for figures below (Figure 4 and Figure 5). Here mayorships (blue), Tips (red), and Dones (green). **1 point**

Reference: https://cdn.iiit.ac.in/cdn/precog.iiit.ac.in/Publications_files/TP_lbsn_2012.pdf (
https://cdn.iiit.ac.in/cdn/precog.iiit.ac.in/Publications_files/TP_lbsn_2012.pdf)



- ☒ In Figure 4, The distribution of minimum inter-activity times is very skewed towards short periods of time, with almost 50% of the users posting consecutive tips/dones 1 hour apart.
- ☒ In Figure 4, On average, median and maximum, users do tend to experience very long periods of time between consecutive tips and dones. For instance, around 50% of the users have an average interactivity time of at least 450 hours, whereas around 80% of the users have a maximum inter-activity time above 167 hours (roughly a week).
- ☒ In Figure 5, Around 36% of the users have average and maximum displacements of 0 kilometer, indicating very short distances (within a few metres)
- ☒ In Figure 5, About 10% of the users have a maximum displacement of at least 6,000 kilometers.

Yes, the answer is correct.

Score: 1

Accepted Answers:

In Figure 4, The distribution of minimum inter-activity times is very skewed towards short periods of time, with almost 50% of the users posting consecutive tips/dones 1 hour apart.

In Figure 4, On average, median and maximum, users do tend to experience very long periods of time between consecutive tips and dones. For instance, around 50% of the users have an average interactivity time of at least 450 hours, whereas around 80% of the users have a maximum inter-activity time above 167 hours (roughly a week).

In Figure 5, Around 36% of the users have average and maximum displacements of 0 kilometer, indicating very short distances (within a few metres)

In Figure 5, About 10% of the users have a maximum displacement of at least 6,000 kilometers.

