

**CptS 575: Data Science**  
**Fall 2020**  
**Survey Paper Topic Proposal**

**Due by: October 31, 2020**

**Description:**

Propose a topic for your survey paper. Your submission should be a simple pdf file containing your name, the topic you are proposing, and a brief reason (two or three sentences) why you choose the topic. You may go in one of two main directions in your choice of topic:

- 1) choose a topic that is related to your semester project, but looks at the broader literature around it OR
- 2) choose a topic that is completely unrelated to your semester project.

Survey papers are to be written and submitted individually. If you happen to choose a topic related to your semester project, make sure to coordinate with your team-mate (mates) so you choose topics that take different angles or explore different issues. Exactly the same topic as your team-mate is not allowed.

A document with guidelines for writing a survey paper is posted separately.

**Suggestions for topics:**

Below are some suggestions for survey topics that you could consider and adapt to your background/interest. This list is meant to inspire ideas, not to prescribe topics. I may update the list if I come up with more

- Deep learning in area X (substitute X with your area)
- Generative Adversarial Networks in area X
- Reinforcement learning in area X
- Artificial intelligence in area X
- Data science in area X
- Supervised learning in area X
- Unsupervised learning in area X
- Sensor data analysis in area X
- Data availability in area X
- Data quality in area X
- Data curation in area X
- Anomaly detection in area X
- Data imputation in area X
- Recommender systems in area X
- Leveraging incidental data (e.g. cell-phone data) in area X
- Network science in area X
- Clustering methods for noisy, high-dimensional data
- Clustering methods for sequence data

- Sequence similarity networks
- Label propagation algorithms
- Bias and fairness in algorithmic decision-making
- Data science and privacy in area X
- Data science and ethics in area X