CSC-450: Finding Abstracts

Directions: Find a *research* article related to a topic that you are interested in

Suggested websites:

- http://scholar.google.com
- http://dl.acm.org

On Piazza, post a follow-up that includes the following information:

- The *title* of the article
- A *link* to the article (make sure this is the complete link, and not a referral)
- State the *methods* the authors used to conduct the research (what did the authors do?)
- State one specific *result* of the research, i.e., what is something specific that the authors found when carrying out the methods stated above
- State the *significance* of the work. Why is the article's contribution important?

An example for the Cellular automata model is given below:

A Cellular Automaton Model for Traffic Flow — Investigating the Effect of Turning

A cellular automaton model is proposed, modeling vehicular traffic flow on a two dimensional lattice in which the vehicles turn at an intersection with a given probability. It is shown that the introduction of turning reduces the long-term average velocity, and can be predicted by a power law depending on the probability of a vehicle turning and the density of cars. The reduction in speed decreases rapidly once the light cycle length surpasses a certain threshold, the value of which can be predicted from the observed power law.

Finner T, Beauregard MA. A Cellular Automaton Model for Traffic Flow—Investigating the Effect of Turning. American Journal of Undergraduate Research. 2014;12(1):3.

- Title: A cellular automaton model of traffic flow – investigating the effect of turning
- http://www.ajuronline.org/uploads/Volume%2012/Issue_1/AJURVol12Issue1Aug2014pp39to48.pdf
- Methods: the authors develop a cellular automata model of traffic flow. An experiment is conducted by varying the vehicle's turning probability and the light cycle length, and measuring the effect on the average velocity of all cars.
- Results: The authors find that the average velocity decreases when the light cycle length or turning probability is increased.
- Significance: the authors show that under the conditions of their simulation, limiting turning and decreasing light cycle length will result in higher average velocities. The author's model can be used as a starting point to explore more realistic traffic situations.

Additional example: http://dl.acm.org/citation.cfm?id=2884855