Term Project

As stated in the syllabus, each student has to work on a term project and produce a term project report.

Report: The report should be a single-column LaTeX document produced using the fullpage package and 11 pt font.

- The document should have the shape and form of a computer science article, i.e., it should have a title, the name of the author, an abstract, introduction, one or more sections with technical material, a section on conclusions, acknowledgments (if any), and a list of references prepared using BibTeX. *Excluding references, the document should be 9-10 pages long*.

- While you may use additional references (e.g., Wikipedia or other online material), your report should be based on at least one substantial published paper in the computer science literature, that is, a paper published in a scholarly journal or in the proceedings of a computer science conference.

Topic: Students are free to choose any technical topic in computer science they wish, but need to inform the instructor in advance and obtain approval that the topic is appropriate. This should be done by **February 12, 2018**.

How to find a Topic: Here are some suggestions:

- Pick an article in the Research Paper Repository at the course webpages or find some other computer science article from Google Scholar or DBLP, learn about the topic studied in the article, read one or two additional related articles, and then synthesize what you learned in a report.

- Read and write about a programming language that you always wanted to learn about (history, syntax and semantics, features of the language, uses, and so on).

- Read and write about a model of computation not covered in the CMPS 130 class.

- Read and write about the technical accomplishments of a computer scientist who has won the ACM Turing Award. The list of past ACM Turing Award winners can be found at `http://amturing.acm.org/byyear.cfm`. This should not be just a biography of the computer scientist, but, rather, an account of the work that this person did and why the work was deemed to be worthy of the ACM Turing Award.

- Read and write about a major technical accomplishment in computer science that has been recognized with the ACM Kanellakis Theory and Practice Award. The list of the past winners of this award and the citations of their accomplishments can be found at `http://awards.acm.org/kanellakis/all.cfm`.

- Read and write about an important computational problem, such as matrix multiplication, linear programming, the graph isomorphism problem, Boolean satisfiability, the Traveling Salesperson Problem, . . .

- Read and write about a topic in computer science that you find interesting, e.g., public-key cryptography, algorithms for ordering search engine results, crowdsourcing, cybersecurity, data privacy, graph databases, healthcare informatics, natural language processing, quantum computing, computers and society, blockchain and cryptocurrencies, deep learning, computer science education, ethical and social issues of artificial intelligence, . . .

Timetable: The deadlines are as follows:

- **February 12, 2018:** Confirm the topic of the term project with the instructor.

- **February 19, 2018:** One-page description of the term project and list of main references.

- **March 2, 2018:** Rough draft of the term project report (3-5 pages).

    - Before you submit the draft draft, you must meet with the TA and discuss your progress on the rough draft.

- **March 17, 2018:** Final version of the term project report (9-10 pages, excluding references).