Term Paper Sample Topics

Your topic does not have to come from this list. These are suggestions. The brief comments and questions for each topic are just a few ideas to spark your imagination and get you started. This list contains dozens of topics.

**Topic List**

**Drones.**
Describe a variety of applications of drones, including useful and destructive ones. Discuss benefits and risks of drones. Discuss ways to deal with some of the risks. Describe and evaluate FAA regulation of drones. Compare with regulation of drones in other countries. Describe and evaluate various actual, proposed, or potential regulations for drones.

**Digital money.**
Background: What is money? Give a brief history of different kinds of money, including past examples that were not issued by governments. New money: Describe Bitcoin (or another digital money system). Why do people use it? What are its strengths and weaknesses? Consider privacy of transactions, volatility, inflation, use by criminals, etc. and compare to standard money.

**MOOCs.**
Give some history and background about massive open online courses (MOOCs). How do they work? What aims do they have? Who enrolls in the courses? Then evaluate them. What is the completion rate? What benefits and problems have occurred? Have they fulfilled their promise? If not, is it likely just a matter of time, or are there inherent weaknesses?

**Computers in the legal/justice system. (Revised)**
Describe systems in use, from legal databases to artificial intelligence programs. Concentrate on AI systems in sensitive applications, for example, sentencing and parole decisions. Consider the prospect of AI systems making judgments in some routine legal cases. Describe and evaluate pros and cons.
Cyber warfare.
Research debates and international agreements about nuclear, chemical, and biological weapons policies and discuss parallels and differences between those and cyber weapons.

Smartphones and privacy.
Use of personal social media content in hiring and firing decisions. Expand on the issues raised in Section 6.3. Describe and evaluate new cases and any significant court decisions or legislation.

Analysis of Facebook.
Imagine that you have been hired to analyze several Facebook features and policies from the average user's perspective and make recommendations for changes.

Cars that drive themselves.
Study progress, safety, and social issues related to an automated system such as self-driving vehicles.

Deep packet inspection.
What is it? What are its positive uses? What are its negative uses? Give examples. Consider network security, censorship, management of network traffic, privacy, and any other relevant areas.

Devices to assist people with disabilities.
Describe some of the new tools and their impact. Discuss issues such as cost, any problems with these devices, etc.

Identification and biometrics.
Choose a few recent uses of biometrics or other identification technology. Discuss benefits, actual or potential problems and abuses, and appropriate guidelines for use of such technologies. You might want to include the example of an identification chip that is implanted under a person's skin. About the size of a grain of rice, it contains personal information and emits a radio signal that identifies the person.

Telemedicine.
Describe recent applications, benefits, possible problem areas (e.g., privacy, errors, loss of personalized care).
Health information on the Web.
Research and report on Web-based health information sites, including such issues as benefits, reliability of the information, privacy protections, techniques to rate or accredit sites, and impact on medical care. You might want to also discuss the impact of (and issues related to) having one's own medical record online, either at one's health care organization's website or in the cloud.

Privacy on the Web.
What are the new issues or problems? What improvements have been made for problems discussed in the text?.

Privacy for organizations and businesses.
All our discussion of privacy concerns privacy for people. There have been incidents in which sensitive information that organizations and businesses must provide to government agencies has been made public, intentionally, accidentally, or by leaks. Release of information about fund-raising, sales plans, pricing, members, or customers might aid competitors. Release of information about manufacture of, storage of, and security for certain chemicals could aid terrorists. Report on some cases and discuss reasonable extensions of principles about privacy for organizations and businesses.

Personal data privacy regulations in other countries.
Report on personal data privacy regulations, website privacy policies, and law enforcement access to personal data in one or more countries other than the United States.

Computing and communication technology in law enforcement.
Choose some examples. Describe benefits and problems. An activity for this project could include a ride-along in a police car. (A few students did this in the past and found it very instructive.) Another possible activity is to interview someone who runs or supervises the use of local law enforcement computer systems. What databases do they access? How do they prevent unauthorized access?

Technological responses to terrorism.
Describe and evaluate some of the computer-based technologies implemented or expanded after Sept. 11, 2001. Consider effectiveness, cost, impact on daily life and air travel, risks, etc., and arguments related to privacy and civil liberties.
Children and cellphones.
How do children use mobile phones? What are the benefits? What are the problems? You might want to focus on a specific age group (young children, teenagers) or cover a bigger range. Do benefits for children and families outweigh risks? What software or other systems have developed to reduce problems?

The global economy.
What are the roles and impacts of computers and communications technology in the increase of trans-border economic activity (e.g., eBay as a global garage sale; customer service workers in other countries; databases to track the origin of a cow with Mad Cow Disease; etc.)? What are the benefits? What are the problems? Is this aspect of increased globalization a good thing for people in the United States, for people in other countries, for humanity in general?

Safety-critical applications.
Find a local application to study, or study the Air Traffic Control system, systems to prevent train crashes, a particular area of medical devices, or other similar topic. Describe systems in use, discuss benefits and risks.

Use of computer and Web technology by restaurants.
Investigate and discuss issues such as customer service, impact on employment, food safety, ambiance. Visit a restaurant with self-service ordering terminals. Some fast food restaurants use robotic devices for food preparation; report on one. Interview a waiter or restaurant manager. (This could be part of a paper that looks at the impact of computer automation in two or three industries or consumer services.)

Spam.
Describe and evaluate technical solutions, current legislation and regulation, and any significant proposed legislation. Some people propose that the federal government create a "Do not spam" list, like the "Do not call" list for telemarketers. Discuss privacy problems that could occur with implementation of such a list. Discuss the roles of technical and legislative solutions for spam. Consider the relevance of freedom of speech.

Information warfare.
Will the next wars be fought without bombs? Will computer networks and computer-controlled infrastructure be the targets of military hackers? What is happening now? What kind of defenses are possible?
**Recent copyright battles for music and movies.**
Report on several recent strategies used by the entertainment industries (legal, technological, and business) to prevent unauthorized copying. Evaluate the effectiveness and ethics of the methods. Describe current controversies.

**Free software and open source software.**
What's happening with "free" software and open-source software now? What is their impact? What are the implications for consumers? For big companies like Microsoft?

**Identity theft.**
What is the current state of the problem? How have consumers and businesses changed behavior in response to identity theft? What technical solutions have developed?

**Hacktivism.**
Report on specific incidents or organizations engaged in hacktivism. Compare to civil disobedience and to other kinds of hacking.

**Are Web issues really new?**
Choose two other technologies or innovations, such as radio, telegraph, railroads, or electricity, and find out what ethical, social, and legal issues and controversies arose about them. Compare the problems and issues to current problems and issues about the Web. What solutions developed? How well do those solutions fit the Web?

**Computing and the environment.**
How do nature/conservation researchers and organizations use computing and communications technologies in their work? Describe applications that help protect the environment. Describe aspects of computers that cause environmental problems. What do environmentalists think of computers?

**Political organizing in unfree countries.**
Choose one country or a few countries that restrict political freedom. Describe how people use social networking sites and other Internet technologies to organize political events, strikes, protests, boycotts, etc. How have these techniques affected the politics of the country? How have the governments responded? What do these experiences suggest for the future of political freedom and democracy?
**Electronic voting and Internet voting.**
The United States and some other countries have experimented with voting on the Internet or using electronic voting machines. How successful were these attempts? Will most political elections be held on the Internet in the future? Discuss the problems of maintaining secret ballots, preventing election fraud, and providing for recounts (for both electronic voting machines and Internet voting). What other issues are relevant? How are the states (and other nations) handling these issues?

**Violence in video/computer games.**
What is the impact on children? How does it differ from television? Consider interviewing people who write and publish computer games to find out their policies and views about violent games.

**The Web in schools.**
How is the Web used in elementary schools? High schools? Are students being taught to use the Web effectively, wisely, and safely?

**Distance learning at the university level.**
What are the common uses? What will be the impact on universities? On adult education? Is cheating a problem?

**Monitoring of employees’ Web use and email.**
What policies are employers using? Perhaps study a few large businesses in your area. Evaluate policies for different kinds of employers (e.g., for your university, covering students, faculty, and staff, and for a software company in a highly competitive business).

**Cyberspace communities.**
What makes a "community"? How do cyberspace communities handle decision making, dealing with troublesome members, etc.? Find one community to study in depth, preferably one that you are a member of or have a special interest in. (Please respect the community's privacy guidelines and ask permission if quoting members.)

**Gender or ethnic issues.**
The *Journal of Women and Minorities in Science and Engineering* might have some useful articles for background and ideas for specific projects. There have been several studies of differences in the way men and women use computers. Some ethnic groups or socioeconomic groups favor different tools (e.g., smartphones vs. tablets).
Computing and network access in other countries.
For example, how are computers used in rural, poor areas of Africa? Choose one country to study in depth or compare a few.

Science fiction and prediction.
Find several science fiction stories published at least 30 years ago that are set in the present time or near future and describe computer and communications technologies. Report on how closely their view of the technology corresponds to what is actually available. What social benefits and problems did they anticipate?

What will the world be like 50 years from now?
How will electronic communications and commerce affect the power of centralized governments? Everyday life? What will happen as computers are connected to the human body? Will human intelligence be of less value in the future? Several experts have written books addressing these issues. You could read two or three and evaluate their predictions.