

Overview

- The paper is due on **October 24** by **4pm** to my office, Room 105B in the green engineering building
 - A paper topic is due on **September 17** at the beginning of class, 9am (or e-mailed to me earlier). Note that you can change this topic as you think more about and begin researching it, but this will be a place to start
 - A rough outline and initial list of 3-5 references is due on **October 3**, at the beginning of class, 9am.
- The total length of the paper should be around 7 to 10 pages, assuming you have figures. For the text part alone, aim for 5 to 7 pages (a word count around 1250). I am not going to count the number of words, but this gives you a target for length, and for the depth of research.
 - Your paper can certainly be longer than this, but if you are finding it hard to write this much, you should either do more research, or add to your topic.
 - You are welcome to work in teams of 2 people – if you do so, then your final paper should be about 50% longer, for a total of closer to 1900 words.
- We will have *short* in-class presentations during the final few classes (October 22 and 24). This will simply be a chance for you to share your topic and interesting things you have either found out or are thinking about for your paper. Each presentation is informal and should take about 5 to 10 minutes total.

Possible Topics

A good topic will focus on a specific aspect of computer technology, explain how it works, discuss the current state of development and/or current uses, comment on where research advances may lead in the future, and discuss possible *societal consequences* of this technology (which are likely to be both good and bad in each person's point of view)

A list of possible topics (not intended to rule anything out that I may have overlooked) is:

- Electronic paper
- Battery technology
- Optical scanners
- Speech recognition technology and software
- Flash memory
- Photonic memory
- Wearable computing
- Sensor technology
- Nanotechnology and computing
- Parallel computing
- Supercomputers
- Quantum computers

- Molecular computers
- MEMS (micro electro-mechanical systems) – goes along with nanotechnology
- Computing with DNA
- Wireless technology and prospects for the future of wireless
- Robotics / Swarm robotics
- Mind/brain interfaces, such as cochlear or retinal implants
- The future of PDAs
- Virtual reality caves

Paper Structure

- Be sure to introduce your topic and also conclude your discussion, *i.e.*,
 - Be sure to have an introduction
 - Be sure to have a conclusion
- Organize your paper so each idea flows logically to the next idea.
- Use formal English *i.e.*,
 - no contractions, such as ‘don’t’ – instead write it out as ‘do not’
 - no dangling prepositions
 - no run-on sentences

Paper content

Be sure to do more than simply summarize what you read in the references (this paper needs to be more than a book report!) Most of what you write will necessarily be summarizing what you research from the references, but also think about the topic on your own, coming up with your own ideas for things such as where research may lead in the future, potential future uses for the technology, and the possible societal consequences of this technology as well as research and development into the technology. Since you are not an expert in the topic you have selected you certainly will not be able to contribute a lot of original thoughts for the topic. Nonetheless, you should synthesize some of the ideas you read, talk about with others, and think through on your own, into at least one or two new ideas for your paper.