Research Project

Purpose: To familiarize the class with the basics of a variety of topics in computer science.

Assessment: You will be marked individually on the presentation you create in your group's shared slideshow using the rubric below. The slideshows will be used as the basis for a short quiz on research in computer science.

Instructions:

1. Decide who you would like to partner with for this project, or if you would like to work alone. Choose a topic from the table (or one of your own choosing) and let Mr. Emmell know. Once all topics have been assigned, presentation order will be randomly assigned.

2. Research your topic. You don't need to go in-depth, just enough that you feel that you have a decent grasp on the big ideas in the research area you've picked.

   Remember that copy-pasting is the enemy — when you're doing your research, keep a Google Doc open and TYPE your research notes in. Summarize and put things into your own words as much as possible. Keep track of the websites you're using. You will probably have to look a lot of things up, and that's okay.

3. Create 5 - 9 slides summarizing your research. Make sure the slides are visually appealing and easy to read — don't cram them with text. Images are encouraged. Include your sources (for information and images) in a bibliography on the last slide.
   - Introductory slide with your topic, your names and perhaps an image
   - Easy to read (minimum 16 pt font, good contrast between text and background)
   - Define your topic (i.e. explain what the research area is)
   - Discuss the topic and the issues surrounding it
   - Last slide has a bibliography for your sources. At least 5 sources.

4. On your assigned day, present your research to the class. Presentation should not take more than 5 – 10 minutes.

5. Give Mr. Emmell one basic question from your presentation to include on a quiz about the research project. Don't make it too difficult. Remember, everyone else is also making questions.

Research Topics

You may research a topic of your choice and present the topic to the class using Google Slideshow / PowerPoint (or whatever you choose). The following are possible topics, many of which are taken directly from the curriculum document for this course.

- Adaptive technologies (text to speech, sticky keys, etc)
- Advertisement Psychology
- Artificial intelligence
- Computer vision
- Cryptography
- Data mining
- Deepfakes
- Describe the negative effects of computer use on human mental health
- Describe the negative effects of computer use on human physical health
- Describe the negative effects of computer use on the environment
- Driverless Cars
- Emerging Technologies
- Evolution of Programming Languages
- Geographic information systems [GIS])
- Human–computer interaction
- Linux
- Postsecondary educational programs leading to careers in the field of information systems and computer science
- Privacy issues around computing
- Problem of pirating
- Processing
- Quantum Computing
- Robotics
- Security concerns (network security, identity theft, etc)
- Technological Singularity
- Trends in careers that require computer skills, using local and national sources
- Women in C.S.

Marking Rubric

Research on topic 40%	Design of Presentation 40%	Presentation 20%
• Clear evidence of thorough understanding of topic • Clear evidence of thorough research of topic	• Information summarized, not wordy • Appropriate and interesting Text • Appropriate Graphics • Consistent background and layout • 5 – 9 pages with logical flow • Related pictures • Varying fonts, justification, visual effects, etc • Text is clear and easy to read • Overall appearance good • Bibliography	• Explains topic well • Gives overview of issues • Loud, clear voice • Confident demeanor • Polite to audience • Appears to understand topic • Provides more information, doesn't just read from slide • Answers questions knowledgeably