



Explore Project – Impact of Computing Innovations¹ 70 points (plus 10 pts in Homework)

Overview

Computing innovations (e.g., self-driving cars, facial recognition systems, Internet protocol, social media platform) impact our lives in ways that require considerable study and reflection for us to fully understand them. In this project, you will explore a computing innovation of your choice. Your close examination of your chosen computing innovation will deepen your understanding of computer science.

General Requirements

Select and investigate a computing innovation that has had, or has the potential to have, (1) significant beneficial and harmful effects on society, economy, or culture; (2) consumes, produces, and/or transforms data; and (3) raises at least one data storage concern, data privacy concern, or data security concern.

You will develop digital media and a presentation that explains and illustrates your chosen computing innovation, and provide detailed written responses to each of the prompts below. Your presentation should portray the computing innovation in an engaging manner, and your content should be in your own words and grammatically correct. You must cite at least three sources that you used to develop your understanding of the computing innovation and that support your written responses.

Deliverables

1. Written Response #1 (max 100 words): 10 points DUE: **Sept 9th** at 11:45pm

Submit PDF document on your computing innovation to Gradescope (link through Canvas):

- Name the computing innovation via a creative title for your Explore Project.
- Describe the computing innovation's intended purpose and function.

2. Written Response #2 (max 750 words): 20 points DUE: **Sept 23rd** at 11:45pm

Submit one nicely-formatted PDF document that includes clearly labeled responses to prompts 2a-2d. Your responses must provide evidence of the knowledge you have developed about your chosen computing innovation and its impact(s). Write your responses so they are understandable to someone who is not familiar with your chosen computing innovation. Include citations, as applicable, within your written responses. **Your response to prompts a-c combined must not exceed 750 words; place total # of words for a-c on bottom of page. Place your answers in order (2a- 2d) with bolded titles below.**

- EFFECTS:** Explain the beneficial and harmful effects the computing innovation has had, or has the potential to have, on society, economy, or culture (choose one). *(Should be ~300 words)*
- DATA:** Using specific details, describe the data your innovation uses and how the innovation consumes (as input), produces (as output), and/or transforms data. *(Should be ~300 words)*
- CONCERNS:** Describe at least one data storage concern, data privacy concern, or data security concern directly related to the computing innovation. *(Should be ~150 words)*
- REFERENCES:** Provide a list of at least three online or print sources used to understand your chosen innovation and support your responses to the prompts. Use ACM's reference format for your citations: <https://www.acm.org/publications/authors/reference-formatting>. **Not part of 750 words.**

¹ This project is modified from the AP Computer Science Principles course.



3. Media Creation: 20 points DUE: Sept 30th at 11:45pm

You must create some sort of digital media that presents your exploration. This can be any form of digital media, but you can NOT use digital audio or video for this part of the project; ask if you are unsure whether your chosen digital media is allowed. Your media must identify the computing innovation and provide a clear explanation, illustration, or representation of the innovation's intended purpose or function. Additionally, your project should present the beneficial and harmful impacts of the innovation. Your submission should not contain text from your written responses 1 or 2. Media will be scored based on quality, layout, accuracy, creativity, and required elements (e.g., impacts). Create a PDF document of your media and submit it to Gradescope.

4. Media Presentation: 20 points DUE: Oct 21st at 11:45pm

You will present your media to an instructor and several classmates (3 of the points are allocated to signing up for a presentation slot on time). This presentation should be 80-90 seconds, with a max of 90. Your presentation should describe your computing innovation's intended purpose and function, as well as discuss the beneficial and harmful impacts. Make sure all of your content fits within the time limit, and PRACTICE to give an awesome presentation!

5. Explore Peer Reviews: 10 points (HW 11) DUE: Oct 21st at 11:45pm

Homework 11 will ask you to provide feedback on the classmates whose presentations you saw. You will take notes during your classmates' presentations, and submit a survey form for each later.

6. Top Explore Presentations: 10 points (extra credit)

Your presentations will be evaluated by your instructor and fellow students in CSCI 101. The top ~10% of Explore Projects (according to both media and presentation scores combined) will receive 10 points of extra credit.

To do well on this project:

You must:

- choose a creative title and develop a visually appealing media and well-done presentation;
- support your written response #2 by using details related to the knowledge and understanding of computer science you have obtained throughout the course and your investigation;
- provide evidence to support your claims using in-text citations;
- use relevant and credible sources to gather information about your computing innovation;
- provide acknowledgments for the use of anything (e.g., image downloaded) used in the creation of your presentation that is not your own; and
- allow your own interests to drive your choice of computing innovation.

You may:

- seek clarification via Piazza pertaining to the task, timeline, components, and scoring criteria;
- seek clarification via Piazza regarding submission requirements;
- as needed, seek assistance from your instructor or CSCI 101 mentor in defining your focus and choice of topics; and
- seek assistance from your instructor or CSCI 101 mentor to resolve technical problems that impede work.

You may not:

- collaborate on this Explore project with others; seek assistance/feedback on answers to prompts; or
- submit work that has been revised, amended, or corrected by another individual.



Explore Project Tips

Whatever media is chosen, include your name and Explore project title on the media! And please submit a file size that is reasonable in size (e.g., use pptx Picture Format feature to compress image sizes). If you chose to create a poster, please use a 4:3 aspect ratio.

10 Media Tips

1. Draw attention with a short *creative* title
2. Include your name
3. Use graphics effectively
4. Avoid crowding, leave some breathing room (though not tons of white space; it's a balance)
5. Have consistent and clean layout
6. Include concise text, to the point
7. Use bullets, numbering, and headlines (make it easy to read)
8. Include sources! (typically placed at bottom right in smaller font)
9. Create something visually appealing
10. Discuss aspects of all requirements (e.g., impacts)

Ten Commandments for a great CSCI 101 Explore Project Presentation*.

1. Thou shalt **not waste space**
2. Thou shalt **be neat**
3. Thou shalt **be brief**
4. Thou shalt **write large**
5. Thou shalt **use color**
6. Thou shalt **have images**
7. Thou shalt **use bullets**
8. Thou shalt **make eye contact with the camera**
9. Thou shalt **speak for 80-90 seconds**
10. Thou shalt **practice**

To do well, do the items in bold!

* Modified from David Patterson's "Ten Commandments to give a bad talk".