

Class 15: Effective Teamwork

- Teamwork
- Project Brainstorming

Teamwork

Slides adapted from Erica Dawson.

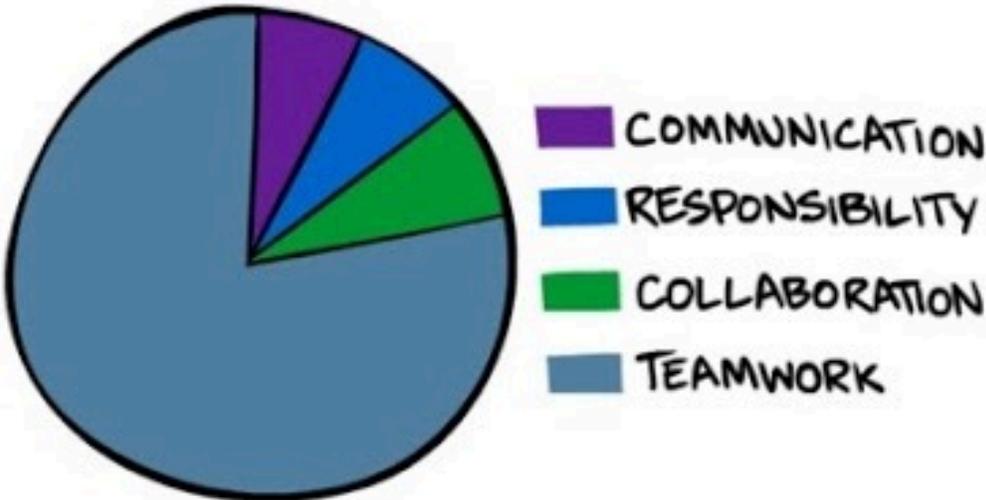
Teamwork

Learning Objective: Work effectively as a team: communicate, collaborate, resolve conflicts, and hold each other accountable.

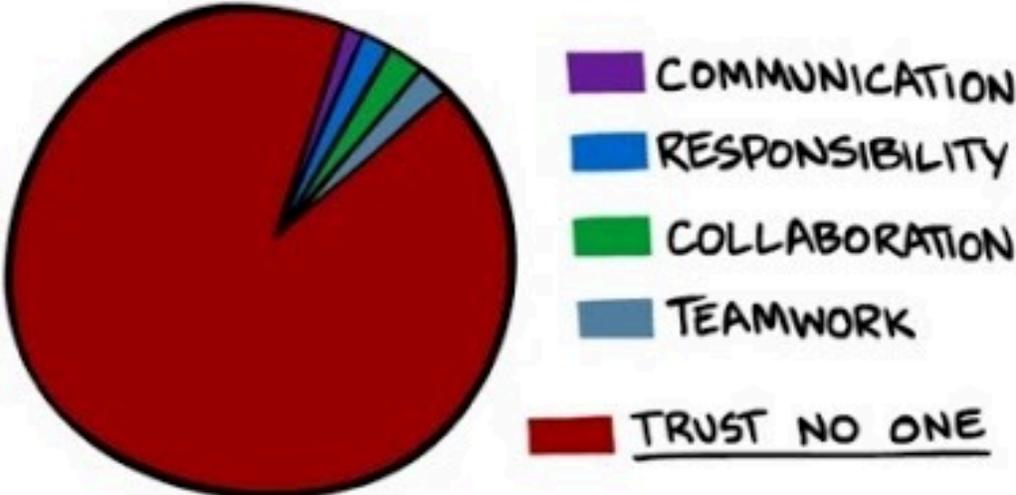
Employers are seeking candidates with soft skills. Especially teamwork skills. In industry, you will be expected to work effectively with others to complete projects. It is rare that you'll work alone on a project.

Can you Relate?

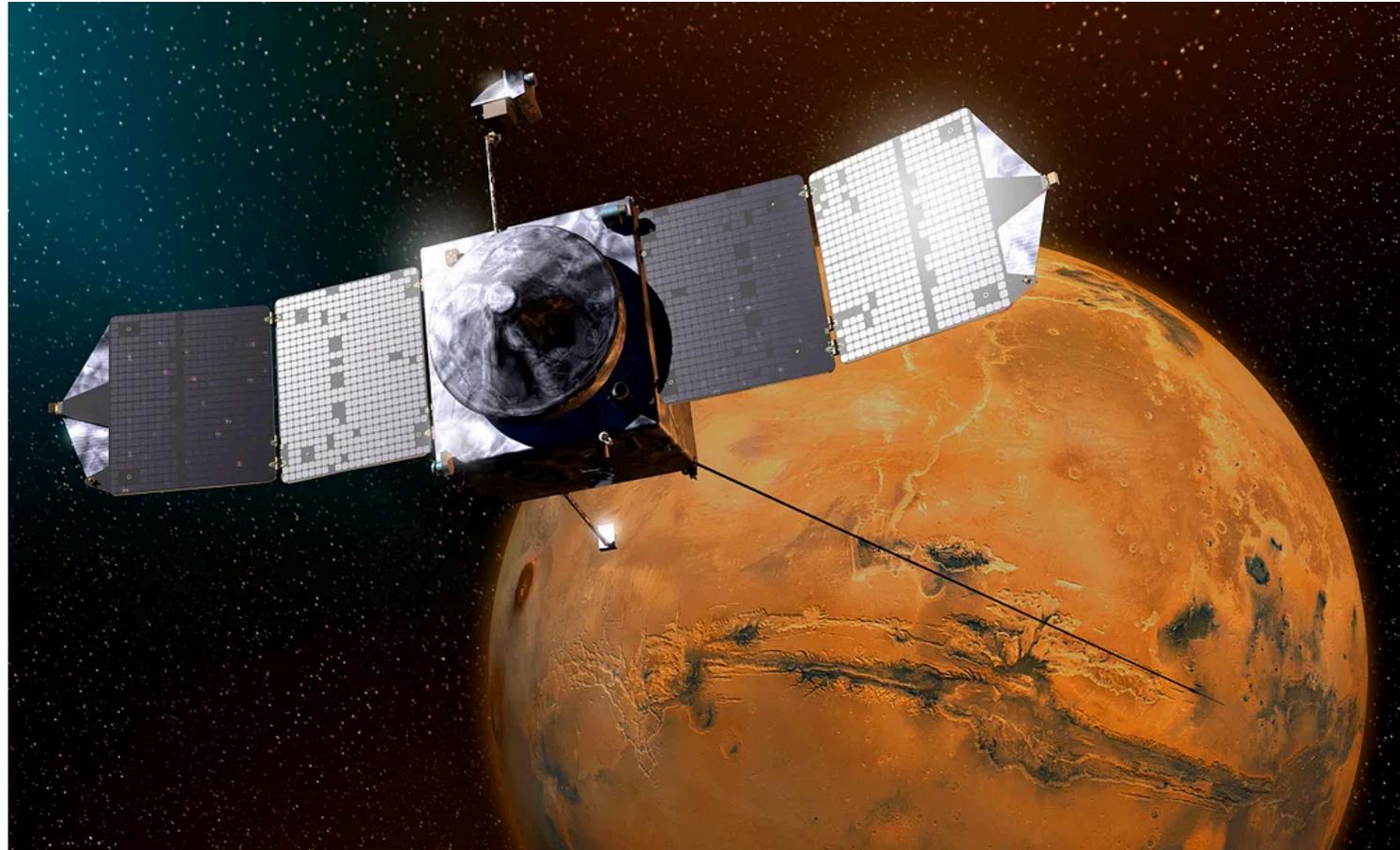
WHAT GROUP PROJECTS ARE SUPPOSED TO TEACH YOU



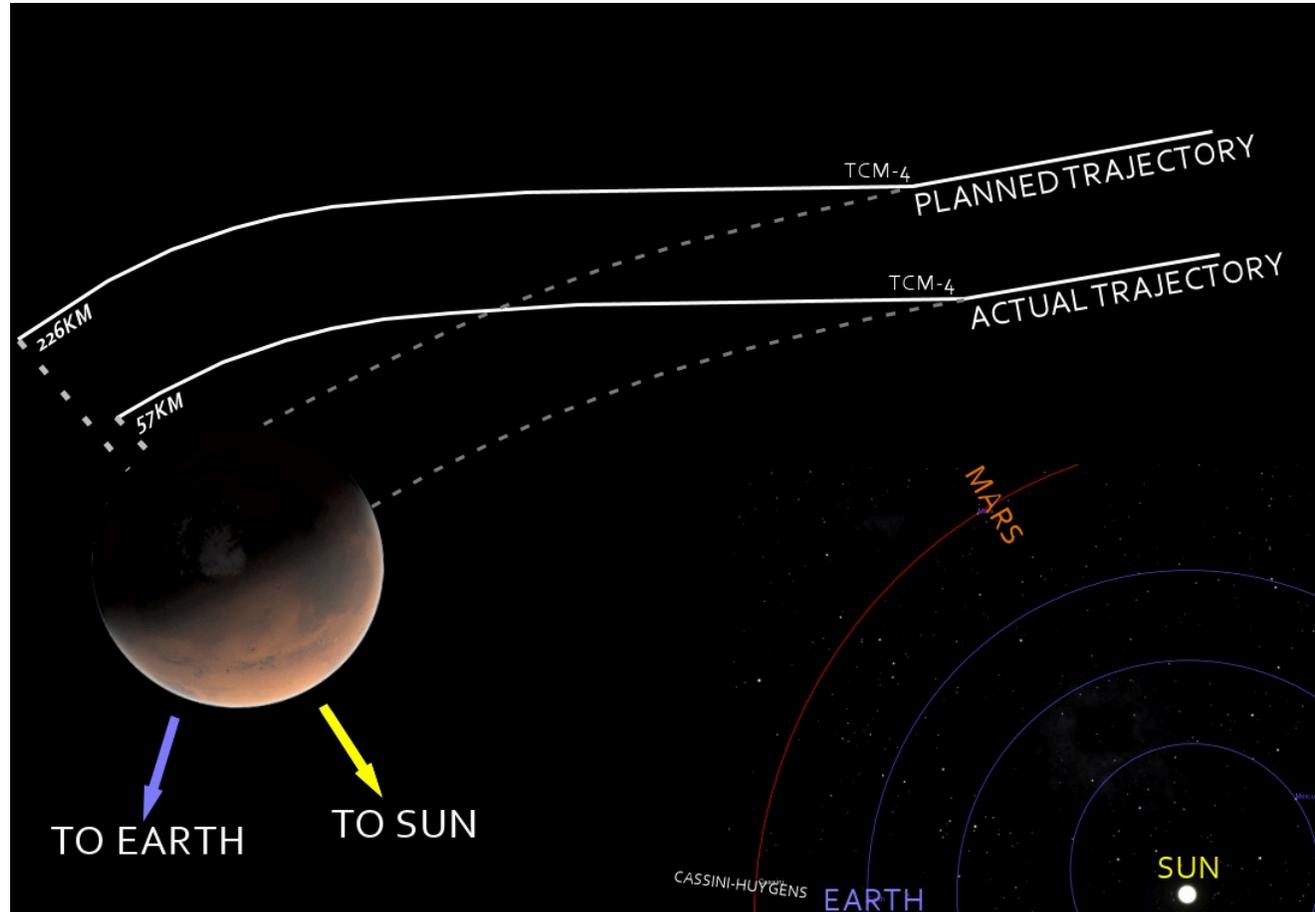
WHAT GROUP PROJECTS TAUGHT ME



The Mars Climate Orbiter



Failure: Why?



Post-Mortem Analysis

- Different assumptions rooted in different cultures
- Informal, infrequent communication
- Failure to follow their own processes
- Lack of clear roles
- Failure to listen
- Failure to advocate effectively
- Overconfidence and wishful thinking

Discussion

What makes an effective teams?

What goes wrong?

Assumptions

- Goals
- Communication
- Work styles

Pretending

- Lack of feedback
- Lack of accountability
- Avoiding conflict

Assumptions

- What is our goal?
- How should we communicate?
- How should we behave?
- What does “success” look like?
- What is “high-quality”?
- ...

Activity: What are your Assumptions?

Reflect on your assumptions about teamwork and communication.

Document several assumptions you have about working with others and communication on your handout.

Pretending

Pretending that everything is fine, when it's not.

Common sources of pretending:

- Lack of feedback
- Lack of accountability
- Avoiding conflict

Feedback: SBI Model

Situation: Describe the situation where the behavior occurred.

Behavior: Describe the specific behavior that you observed.

Impact: Describe the impact of the behavior on you or others.

Activity: SBI Feedback

Practice giving feedback using the SBI model.

Example:

“ Grace, in our presentation yesterday you interrupted me several times. I feel like you weren't really listening and worry that it made a bad impression about our teamwork.

... In the future, please allow me to finish speaking before you talk. ”

Addressing Conflict

“ Ann is such a jerk! She interrupts me all the time and makes us look like a bunch of fools in front of the client. Don't you agree? ”

Accountability

Hold each other accountable for following through on commitments and for upholding the **team contract**.

1. Be timely
2. Be consistent
3. Assign group ownership
4. Assume the best
5. Focus on solutions

Team Contracts

- What are our goals?
- What are our ground rules?
- How will we communicate with each other?
- How will we communicate and work with others?
- What roles do we want, and what are the responsibilities?
- How will we hold ourselves accountable?
- How will we deal with conflict?
- ...

Project

Project: A Substantial App Prototype

For the remainder of the semester, you will work in teams to design and implement a substantial app prototype that uses an LLM to support a user with a task.

The project will be completed in **three** *or* **four** sprints, with a project proposal due at the end of the first sprint. The project proposal will include a description of your app idea, a few design sketches, and a team contract.

Your team will pick a project topic. You may create a desktop or mobile app.

Project Scope

The app should be **substantial**: bigger/more complex than the contrast checker, chatbot, and LLM prototypes.

A rule of thumb: Take homeworks 3, 4, and 5 and combine them into a single app. That's about the size and complexity for this project.

Insufficient scope will result in a low grade.

Project: Topic Don'ts

- No “student” centric apps, like reserving office hours, etc.
- No chatbots
- No “trackers”
- No “generators”
- No accounts / logins (Do you log in to use the calculator app?)
- No server-side code
- No calls to service APIs

Project: Topic Dos

Pick a topic that lets you showcase and develop your skills and creativity.

Try and pick a topic that helps solve **meaningful problems** to make the world a better place.

Must run **entirely** in the browser and all functionality must be entirely self-contained in the app. (No calls to external APIs or services.)

Example: Government Literacy App

“ **Fix my “pothole”**: Most citizens do not understand the structure of their government and how to navigate its bureaucracy. Help citizens navigate their government, rather than be frustrated that *nothing ever gets done*. ”

You are concerned about raising electrical prices and environment impact of a new data center being built on Cayuga Lake. Do you contact the president of the USA? Do you contact the governor of New York? Do you contact your state representative in March after the New York assembly is already in session and there's no time to craft a bill? Do you contact your local county government?

Every road is owned by a different government entity. To fix a pothole, you need to contact the right government entity. Is it a town road? A county road? A state road?

Example: Well Water Safety

“ **Is my water safe?** Most rural households in the US rely on private wells for water. These wells are not regulated by the government, and many are contaminated with harmful chemicals and bacteria. Help people manage their well water safety by providing information about testing, treatment, and scheduling maintenance. ”

Is it time to flush your well? Shock your well? Test your well? What containments should you be concerned with? How much is this going to cost?

https://www.health.ny.gov/environmental/water/drinking/private_wells.htm

Example: Reduce Carpentry Waste

“ **No more saw scraps:** Carpentry projects generate a lot of waste, especially saw scraps. Help carpenters reduce waste by helping them plan their cuts more efficiently and find creative uses for their scraps. ”

You are making a table out of wood. You have a 10 foot long piece of wood. You need to cut it into 3 pieces: 2 pieces that are 3 feet long and 1 piece that is 4 feet long. How do you cut the wood to minimize waste?

Activity: Project Idea Brainstorming

Pair up in groups of 2-3 people.

Go to the board and brainstorm project ideas. Write down ideas. Make **very fast** sketches of an idea. Draw ideas. (Need inspiration? <https://flathub.org>)

Don't worry about feasibility.

Just be creative and think about real problems that can make the world a better place.

Swap! Switch groups and brainstorm more ideas. (Leave your previous ideas on the board for the next group to build on.)

Activity: Project Idea Exploration

Now, move around the room and **explore** the ideas on the board.

Find an idea that you want to explore further and **stay near it** in the room.

Talk to others who are near the same idea and explore the idea together. Ask questions about the idea. What is the problem? Who is the user? How would the app work?

Assemble Teams

Find users that share your interest in a project idea and form a team.

INFO 4340: Groups of **4** people.

(9 groups total: A-I)

INFO 5440: Groups of **3** people + **one** group of **2** people.

(5 groups total: V-Z)

Teamwork

Exchange contact information. Plan a meeting outside of class to work your first sprint **before** the next class:

- Team name
- Team contract (your ground rules)
- Project proposal (description, sketches, etc.)

What's Next?

Tomorrow: Oral Exam Scheduling + Exam Begins

Due Tuesday: Spring 1

Next Class: Proposal Feedback