Navigating Spark Projects

Syllabus: https://gallettilance.github.io/

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Working in a Team

Even if you have worked in a team before, please read through this guidance / advice for navigating spark projects.

1. Don't compete against team members
    a. Don't try to outshine your peers - focus on the team's success (your work will not go unnoticed).
2. Enable and encourage each other
    a. Everyone has a different set of skills: help each other
    b. 100% of you is nothing compared to 1% of the team - so invest in the team
3. Be transparent and communicative
    a. Overestimating what you are able to deliver is normal - it's important to communicate with your team to let them know of the change to what you are able to deliver
    b. It's ok if you can't make it to meetings once in a while but you must let your team know in advance.
4. Meet with your team regularly
5. Provide and listen to feedback / suggestions
    a. As a team it's important to acknowledge what is and isn't going well in order to improve
    b. Don't take it personally - everyone is accountable in the team. It's the team as a whole that needs to improve - not just you.
6. Be responsive to emails, messages etc.
7. Respect everyone's role and responsibility
    a. Even if you think you know better, don't:
        i. Add or create tasks without including the team lead and PM
        ii. Go ask a fellow teammate directly to do some work - ask the team lead for help, they will delegate down
8. Team member email best practices:
    a. CC the team lead when contacting the PM
    b. CC the PM and team lead when contacting the instructor
    c. You should almost never have to email the client directly but if you do, make sure you have approval from the PM first and include them in any communication between you and the client.

Roles and Responsibilities

Client: Defines the What + Why

They can answer questions relating to the What and Why of the project but they are usually very busy and will not have the time to answer all the questions you may have about the project. This is why there is a project manager.

Project Manager: Defines the What + Why + How

They are the technical representative of the client. They drive the technical project requirements.You should go to your project manager first with any questions you would have for the client. In addition to answering the What and Why of the project they should also be able to help on the technical How.They are also there to help with prioritization, team issues, provide evaluations and feedback etc.

Team Lead: Defines the What + How + When

The team lead is organized. They work with the team to split up, delegate, and assign deadlines to tasks. They facilitate two team meetings:

1. Once a week scrum:
    a. What are you working on?
    b. Are you blocked / need help?
    c. What can you work on next?
2. Once a month retrospective:
    a. What is going well?
    b. What is not going well?
    c. What steps can we take to improve?

In addition to this team lead work, team leads are expected to also serve as a team member.

Team Member: Executes on and Re-evaluates How

Team members execute on the work needed to be delivered. Communication back to the team lead and PM is crucial:

1. Did you discover something that changes how possible the project is?
2. Are you still on track to deliver what you committed to?
3. Is there a better design you can propose?

Expectations / Grading

- All team members should contribute equally and proactively to project work; we will evaluate team contributions through a peer evaluation at the end of the semester and this will be factored into your grade.
- You / your team lead should make yourself available to speak with your client on a bi-weekly basis (depends on client availability)

- You / your team lead should meet with your Spark PM on a weekly basis
- You should meet with your team every other day (can / should be a short meeting)
- For any team communication issues, please let your spark PMs know asap - they are here to help. If the problem persists please email me with a description of the situation.
- All students are expected to abide by University conduct policies as detailed in the following links:
    - Boston University Student Codes of Conduct
    - College of Arts & Sciences Codes of Conduct
    - Boston University Student Responsibilities

Fall Schedule Spark! Project Overview

Teams are expected to complete deliverables on their set due dates. If a team needs more time on a deliverable this must be communicated to the PM at least two days prior to the due date. The PM will alert the instructor and will communicate the extension time to the team.

Pitch Day: 9/19

Due: October 3: Deliverable 0 - Kick off Client Meeting

Due: October 15: Deliverable 1 - Preliminary Data Analysis/Collection

Due November 7 and November 12: Deliverable 2 - *Early Insights Presentation*

(Presentation Meeting done by 11/7, Submitted to Lance by 11/12)

Due: November 16: Deliverable 3 - Draft Complete Report

Due: November 30: Deliverable 4 - Refine Draft Complete Report

Due: December 12: Final Deliverable - Final Report

Project Deliverables

See: https://github.com/BU-Spark/

Project deliverables can be modified with approval of PMs, the client, or the instructor. The team must alert the PM in advance of any changes that need to be made.

Project Deliverable 0: Client Kick Off (Due: 10/3)

The Project Manager will have coordinated weekly team meetings and biweekly/office hour style client meetings. The team should have set up weekly meetings with their client for the remainder of the semester, reviewed the project scope, and discussed any pertinent questions and/or received clarifications about the project. The students are highly encouraged to ask questions about the project and engage with the client.

Checklist

- [ ] Submit the Client Kick Off scrum report to Gradescope

    a. What is the project focus/overall goal?
    b. What type of data will you collect or be analyzing?
    c. What are potential limitations of the project?
    d. Why is this project important or Why did you choose this project?
    e. What is your team's next steps? *(include action items/tasks)*
- [ ] Schedule Early Insights Presentation at Client Kick Off Meeting

Project Deliverable 1 (Due: 10/15)

Sufficient data should have been collected to perform a preliminary analysis of the data and attempt to answer one question relevant to your project proposal which you will submit as a pull request. If data has already been collected for your project you must answer two questions.

Checklist

- [ ] Collect and pre-process a preliminary batch of data
- [ ] Perform a preliminary analysis of the data
- [ ] Answer one key question
- [ ] Refine project scope and list of limitations with data and potential risks of achieving project goal
- [ ] Submit a PR with the above report and modifications to original proposal

Project Deliverable 2: Early Insights Presentations (Meeting Presentation: 11/7, Submission Due: 11/12)

The team should have collected more data and continued to perform a more thorough analysis. There must have been an attempt to answer one additional question relevant to your project proposal. The team will create a presentation using this template: Presentation Outlines

The team must record the presentation meeting with the client and then submit the recording through Gradescope and to Professor Galleti.

Because there are two distinct project styles (city council vs client based), the requirements are slightly different in the content that needs to be included.

Checklist

1. **Client Based Projects:**
    a. Answer 3-5 questions
        i. This will be a status report of what you have accomplished so far. You will need to include:
            1. Any additional challenges you have encountered?
            2. What limitations have you encountered?
            3. What assumptions have you had to make?

4. What were the expected next steps, and did you follow them or did the scope change?
5. What are you planning to do to complete your project?

2. **City Council Projects:**
    a. The Base Project includes a rigid, set scope with a clear end deliverable. The questions to be answered, wanted visualizations and visualization answers, are clearly outlined for the student to complete. You will present the findings from the Base Project (this is not your final report, but rather a draft). Make sure to answer the specific questions on your project document.
    b. The end of the presentation must include the team's Extension Project. This is the opportunity for students to be creative with additional data sets and sources that they believe will tell an interesting story. The team should utilize this template for their proposal and incorporate it into their presentation. This will be pitched directly to the client, and they will have to sign off on the idea.

Teams will sign up for a presentation time with their respective city councilor liaison . This sign up sheet will have been created by Spark and sent to the PM early in the semester once schedules have been confirmed. Given the amount of schedules to coordinate, the required attendees for this presentation include the Team Leads and PMs. Please note that all team members are required to participate in the work and if they are not able to attend the presentation time, they must account for that in the work they take on to ensure that everyone is doing their fair share.

Project Deliverable 3 (v1 Draft Complete Report) (Due: 11/16)

Client Based Projects: All data should have been collected. All project questions should have been reviewed, answered, and submitted in a written document outlining findings. You will also be asked to submit the associated data and a README explaining what each label/feature in your dataset represents. Your team should meet with the client before this deliverable.

City Council Projects: All base project questions should have been reviewed, answered, and submitted in a written document outlining their findings. This document should also a sufficient amount of data analysis on their extension pitch.

Checklist

- [ ] All data is collected
- [ ] Refine the preliminary analysis of the data performed in PD1&2
- [ ] Answer another key question
- [ ] Attempt to answer overarching project question
- [ ] Create a draft of your final report
- [ ] Refine project scope and list of limitations with data and potential risks of achieving project goal

- [ ] Submit to Gradescope with the above report and modifications to original proposal

Project Deliverable 4 (v2 Draft Complete Report) (Due: 11/30)

This is a draft of your final report that has been reviewed by your client. It includes all visualizations, results, data, and code up to this point, along with proper documentation on how to reproduce your results, compile and use your codebase, and navigate your dataset. Your team will submit this as a PR.

Final Project Deliverable (Due: 12/12)

This should be an enhancement of deliverable 4.