



Team Standards

Jet Propulsion Laboratory Image Analysis

Team Hindsight

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Dr. Doerry

Overview: Please refer to this page when reviewing the team standards and expectations. This document contains a detailed description of the conduct for each member of the team as well as the tools we will be using for this project. The conduct covered includes meetings, deliverables, and other responsibilities. Also included are the steps in which our members will attempt to correct issues and maintain personal responsibilities.



Project Overview: Jet Propulsion Laboratory, California Institute of Technology Mars 2020 rover is our client. We are tasked with generating software that will allow JPL to verify whether or not an image is clear of dust particles as well as any particles in the image that are not the point of study. The rover will be grinding down rock surfaces and taking photos of the martian rock, in these images JPL is hoping to find traces of organic lifeforms. This means the pictures need to be free of any dust so the results are inconclusive.

Project Requirements:

- Application to analyze rock sample images for dust-free areas.
- Must accept either individual image files, or bulk images
- Must distinguish between dust-covered and dust-free rock; and extract appropriate measurements of the dust-free area based on camera and set-up calibrations automatically, without access to separate visual Scale.
- Must handle at least one major rock type for proof of concept
- Must display a visual of the dust-free area, allow for the user to manually adjust, and re-calculate measurements afterwards.

Extras:

- Improves dust-free algorithm based on user adjustment.
- Handles all five major rock types, including white rocks/dust, rocks with cavities, rocks with fractures.
- Handles analysis of random “challenge rocks” not clearly classified in previous image database.
- Sensitivity slider and/or other GUI controls for manually adjusting the analysis

Roles:

Team Leader: Hunter Rainen

Organizes meetings, presentations, and client group relations.

Client Communicator: Hunter Rainen

Regulates communication between team and client.

Recorder: Charles Beck

Maintains professional documents and meeting minutes.

Architect: Adam Paquette

Makes sure we are following client guidelines and specifications.

Release Manager: Alexandria Nelson

Validate Deliverables are ready to be turned in hours before due time/date.



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Coder:

All group members.

Develop software needed for the project's completion.

Meetings:

Meeting Time(s): Tuesday 3:00 - 3:30pm with team mentor. SICCS (EGR 105 if available)

Tuesday 3:30-4:00 pm with group. EGR

Friday 3:00 - 4:00 pm with group. EGR

Friday 4:00 - 5:00 pm with client(tentative). (Skype)

The meeting times are set in advance and will be held accordingly. The mentor and client both have freedom to choose meeting times as needed, but they must be okayed by the group before it is carried out. We will use slack and email to set up impromptu meetings.

Agenda Structure:

Group meetings	-	Beginning:	Overview of what was discussed last meeting.
		Check list:	Check off tasks or update progress of tasks.
		New Items:	Communicate any new tasks or issues.
		Vote:	Vote to pass new items, add to task list.
		Notes:	Members convey any added comments.
		Summary:	Summarize meeting and new task list.
		Convene:	End Meeting.

Minutes:

Recorded by team recorder, the minutes will outline the task list updates and any other important information discussed in meetings. The minutes will contain the following...

1. Members present
2. Time Start/End
3. Date
4. Task list
5. Voted items
6. Other comments

The minutes will be available in a meeting folder in the team's github repository. These will be done each meeting for the sake of clarity.

Decision Making:

Decisions will be made by a cast of votes in a democratic fashion. The recorder will call a motion to vote on the item in question and members will exclaim either an 'I' in favor of or a 'Nay' if against. If members vote $\frac{3}{4}$ in favor the motion will



vote against the motion will be vetoed. If the team member that voted differently would like to discuss why they believe the motion should be passed or not than they can do so during the meeting while all members are present. For ties, we coin flip.

Attendance:

It is important for all members to be at each meeting agreed upon by the group. If for some reason a member can not make a team meeting we will need at least three hours notice to accommodate any changes. There is no excuse for missing a meeting with a client and the only reason this is allowed is if an emergency has come up with out warning. Any other attempt to not be present at client meeting will be seen as an attempt to evade responsibilities. The steps blow will only be taken if a team member fails to communicate correctly with the rest of the team.

1st missed team meeting: Team will communicate with member on why they missed the meeting and what was covered. We will attempt to schedule better meeting times to suite everyone's needs.

2nd missed team meeting: Team will speak with member once more and this time will present a formal warning of disciplinary action.

3rd missed meeting: Team will generate a directed disciplinary action to highlight continuing performance issues. Team will follow phase 2.1 of the 'Managing non-performing team members' posted in the classes main webpage. After this the offending team member may follow procedures outlined in phase 2.2.

Conduct:

- Each team member will respect each others views and ideas. We will treat each idea with the same level of seriousness as the last.
- Interruptions will be seen as unprofessional and are not to be carried out.
- Members will wear business casual attire and maintain professional conduct when meeting with the client and will maintain good hygiene.
- Non-participating members will be spoken to and the group will work together to make a solution.
- Each change to the project will be overseen and voted on in meetings or impromptu through slack, email, or other communication avenues.



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- All team members must check slack/ email at least once a day, if they will be unavailable for a period of time, they must ideally give less than or equal to 24 hour notice

Team Self Review:

Informal, don't have to write anything down unless each person wants to, but maybe once every 2-3 weeks, each team member should make a mental note of: Things they've done well, things they need to work on, things they could use some help on, could also be recommendations to make their job more productive/ better. Then we will discuss what each team member made note of at the last team meeting of each month.

Deliverables:

All deliverables will be worked on by each member of the group. Final checks will be done by the recorder and release manager of the group before due time. Hard cover copies will be turned in by either the recorder or release manager to the client or the capstone director's office.

Presentations:

Each member is expected to be at every presentation and take part in speaking about the project to the audience. Some may have more talking than others but everyone needs the opportunity to improve presentation skills.

Tools:

Version Control:	Github	https://github.com/Beckcjb/Hindsight
Issue Tracking:	GitHub, Trello boards	
Word Processing:	Google Docs, Libreoffice, PDF	
Presentations:	Microsoft PowerPoint	
Communication:	Slack, Skype, Email	
Composition:	Team will collaborate all phases of composition.	