O **Outlook**

[CS 488T] Sprint 1 Report, Team 11 [stewartc]

From shelbyemailrelay@gmail.com <shelbyemailrelay@gmail.com>

Date Sat 2/8/2025 9:05 AM

To Stewart, Caleb <cstewart15@ewu.edu>

Caleb,

This report describes the activities of your EWU Senior Project team over the previous self-evaluation period (usually Saturday through Friday). It contains only public information. Private information and comments, etc. are available only to the instructor. If you notice any discrepancies or have questions, please contact Dan Tappan at dtappan@ewu.edu.

Sprint 1 Team Report

Team 11: Team 11

· Lane Keck
· Caleb Stewart
· Logan Taggart

Logged Hours

The team is generally free to work whenever they want during the sprint. The expectation for a team of three members is 45 hours total (15 per member) on average. However, this number will vary throughout the course.

Individual Hours:

| Member | Hours | All Sprints | | | | | | | |
		Total	Min	Max	Avg^1	Avg^2	Std^2	Count^1	Missed
Keck	3.0	3.0	3.0	3.0	3.0	3.0	0.0	1	0 (0%)
Stewart	2.0	2.0	2.0	2.0	2.0	2.0	0.0	1	0 (0%)
Taggart	3.0	3.0	3.0	3.0	3.0	3.0	0.0	1	0 (0%)
Team Total:	8.0								

^{1}including and ^{2}excluding missed submissions for required sprints

Team Hours:

Sprint 1	Total	Min	Max	Avg	Std
8.0	8.0	8.0	8.0	8.0	0.0

The following is optional descriptions of daily work that is not captured as activities below:

Stewart:

- Research how to handle the logo tracking and computer vision. Trying to figure out what frameworks and tools we should use.

Taggart:

- Figuring out what languages/frameworks/libraries or tools we could use for the program.
- Reading and researching on how we should go about training our machine learning model.
- Researching ways to artificially generate pictures of a logo from different angles, brightnesses, etc.

Activities

Activities are member-defined units of work that are formally tracked from sprint to sprint (unlike the optional descriptions above). Every activity must be accounted for from its creation until it is completed or abandoned.

New Activities

These activities were created by during this sprint.

Keck

Activity 65: Research Logo Detection Frameworks

Figure out the best way to approach our logo detection (two sprints expected)

Activity 66: Learn YOLO

Learn the services that YOLO offers (two sprints expected)

Stewart

Activity 61: Frameworks and Tools

Figure out what frameworks and tools we should use for this project. (one sprint expected)

Activity 62: Find Dataset

Find an appropriate dataset to track and find logos. (two sprints expected)

Taggart

Activity 63: Languge/Tool Research

Figuring out the approach we will take to coding the program's front and back end. (one sprint expected)

Activity 64: Machine Learning Research

Figuring out the best approach to take to build and effectively train our image recognition model. (one sprint expected)

Team Reflection

This section refers to the team's collective perception of and reflection on the project over this sprint.

The instructions are: Consider the following four pairs of questions hierarchically. They are <u>not</u> the same question. If you think they are, then you are likely not using an appropriate breadth and depth of software-engineering thought. This course is a practical application of the aspects of product, process, and people. We are trying to account for everything: not just to create a good product, but also to learn from the process to improve the people. Reflect on the experience of the entire team collectively over this sprint. You do not need to account for all work, just two examples that are most representative of easiest and hardest.

For reference, *understand* relates to the comprehension of what needs to be done; *approach* to how you think it should be solved; *solve* to implementing the actual solution; and *evaluate* to demonstrating to yourself and your team (if applicable) that the performance of your solution is consistent with everything else in the project. Remember [The Cartoon](#) from CS 350.

Understand

Easiest:	The easiest aspect of the project to understand is the overall goal. Our objective is to detect and track logos in video footage to analyze branding visibility, which provides a clear direction for our work.
Hardest:	The most challenging aspect to understand is how to effectively integrate the object detection model. The main difficulty lies in selecting the best approach for tracking logos over time and ensuring accurate logo detection across different frames within a video.

Approach

Easiest:	The research phase has been relatively straightforward. We have explored existing object and logo detection models and found several articles detailing how others have fine-tuned models for logo tracking, providing a solid foundation for our approach.
Hardest:	The most challenging aspect to approach is selecting an appropriate dataset and determining the best way to train the model for accurate logo detection. Ensuring the dataset is diverse enough to handle variations in size, lighting, and occlusion adds to the complexity.

Solve

Easiest:	The easiest aspect to solve has been deciding on our frontend and backend frameworks. As a team, we agreed to use React.js for the front end and Python for the back end, providing a clear foundation for development.
Hardest:	The most difficult aspect to solve is selecting the right image detection approach. While we are leaning toward YOLOv8, we still need to determine whether to use a pre-trained model or train our own, as well as identify the most suitable dataset for accurate logo detection. There are still many unknowns in this area.

Evaluate

Easiest:	The easiest aspect to evaluate at this stage is whether the chosen model can successfully detect a logo in a static image. This is a straightforward yes-or-no test, and we can reference similar projects that have achieved this with comparable models to validate our approach.
Hardest:	The most challenging aspect to evaluate is determining whether our chosen dataset is sufficient for accurate logo detection or if using a pre-trained model would yield better results. Assessing the dataset's quality and its impact on model performance will require thorough testing and experimentation.
Completion:	1%. This was sprint 1, and I think we are starting to get a good base going. If we continue at this pace focusing on milestones, success seems likely.
Contact:	There is no client. We have met as a team.
Comments:	Not at this point.

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