

Milestone 2: Image Processing

Softwin Enginwinning

CSC 340

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Introduction

We are constructing a computer vision model to recognize EVERY image. Our goal is to create a program to respond with a word to recognize the image.

Executive Summary

We are building an image recognition application. The purpose of this project is to provide a robust image processing service to our users. Our estimated time is 25.75 hours. This project actually took us 26.25 hours. The cost of this project is based on our \$25/hour (not including tips) is 656.25 dollars.

Project Organization

Our team is made up of four of the top 10 programmers at Concordia College (numbers 1, 3, 6, and 9). Isaac is the team leader, Joseph is the project manager, Tyler is our lead developer, and Cheryn is head of UX/UI.

Risk Analysis

There are several risks associated with project development. It could be difficult to amass the number of photos needed to make a workable project. Thousands of photos are needed for just one animal.

Hardware and Software Resource Requirements

As developers. For a computer program, we will need computers. We will additionally need software that we can use to code this project.

Work Breakdown

Overall time and price estimate:

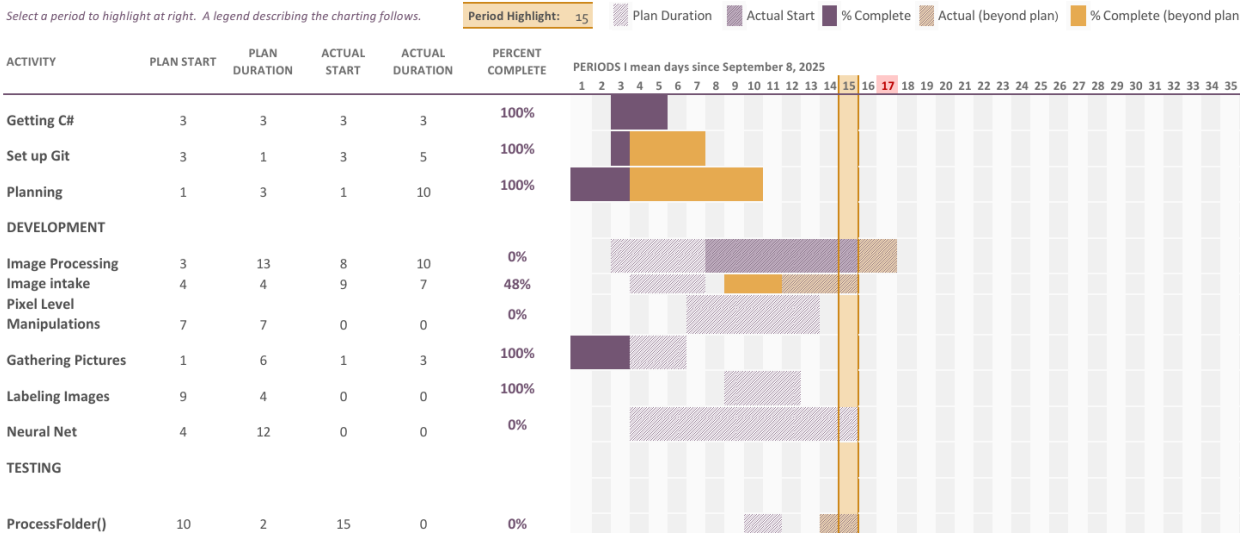
Task Name	Description	Estimated Hours	Actual Hours
Milestone 2			
Step One	Complete Planning Document	8	6
Step Two	Time and Budget Estimates	4	4
Step Three	Good Software and Ethics	2	2
Step Four	Configuration Management	3	3.5
Step Five	Software Processes	2	4
Step Six	Component Implementation	6	6
Step Seven	Presentation	0.75	0.75

Project Schedule

We will be splitting up tasks between the group members by their respective roles.

Milestone 2: Computer Vision

Select a period to highlight at right. A legend describing the charting follows.



Good Software and Ethics

This section contains the notes from a group discussion about good software, ethics, and best practices.

Good Software:

- Maintainability

Our features should be well documented. It should be easy to understand and should be bug free. We will make sure the program is able to be understood by any developer.

- Dependability and Security

The features we develop should be dependable, meaning our image processing users should be able to use our program to complete the desired task without running into issues. As for security, our team must be aware of the image libraries we use to train our image processing program and ensure they are suited for the task. Additionally, we must have a way to ensure that files submitted by users for identification do not compromise the utility of our program.

- Efficiency

Since we have created our features from scratch, we can choose to implement only what we find necessary, unlike in a library made by others. Our tradeoff for convenience in the programming is the promise of making something better ourselves.

- Acceptability

Our project and features are acceptable as they function as designed. Furthermore, there should be no moral or ethical issues in the use and creation of this project.

Ethics:

- Confidentiality

Our project will be publicly available. We maintain a transparent view of our project, and do not intend to hide anything within sensible means.

- Competence

Our project is very competent as it fulfills the requirement of working correctly and without any major issues. Furthermore, each one of us in the group has demonstrated our competence by contributing to this project in strong and meaningful ways.

- Intellectual Property Rights

One of the challenging parts of making this project entirely from scratch is gathering enough images to create the training libraries for image identification. Luckily, each of us has taken a deep learning course that involved creating our own training set for Niblet identification images. Without this, we would have to be very certain that the images and code we use do not infringe upon someone else's intellectual property and avoid any potential legal disputes that may arise from the development of our program.

- Computer Misuse

Computer Misuse is common with software not prepared for it. To prevent computer misuse, our group should focus on filtering images that come into our training model and images that are submitted by users.

Configuration Management

This section was completed on GitHub. After changing the scope to be completely team-based, this will have a minimal impact on the future development of our project.

Software Processes

Screenshots of our project's GUI will go here, implementation will be through GitHub.

