Appraising Team 5's Requirements Spec. documentation

Noise	~~An example of Noise in the document is in the first proposed Goal. They say that the algorithm must classify an image with certainty and must be implemented as a plugin for the system. Then continue to keep elaborating and repeating themselves and providing definitions of terms within the Goals~~
Silence	~~Could not find evidence of Silence as all aspects of the problem seemed to be covered in the document~~
Overspecification	There are a lot of examples of Overspecification as a lot of features of a solution are expressed where it is not necessary and because of this they might have left out important problem features. An example of this is in the proposed goals section where they show possible solutions to the problem without engaging in all aspects of the problem itself
Contradiction	~~Could not find evidence of Contradiction as all features have been defined in a compatible way~~
Ambiguity	~~There are many elements of the document where features described could be interpreted in at least two different ways. This is due to features probably not being described specifically enough and not because the group doesn't have a good idea of the features themselves. An example of this is the first functional requirement being described as a plugin that will determine whether an entry has been classified and there are at least two ways to implement a solution for this~~
~~Forward Reference~~	~~An example of forward reference in the document is that of the certainty classification algorithm being referenced many times without proper definition of the concept without particular warning to the reader~~
Wishful Thinking	~~Could not find evidence of Wishful Thinking as all features can be realistically validated~~

Appraisal of Team 5

Noise	In Proposed Deliverables, paragraph 2: "...reliable platform for the scientists and volunteers to upload new data". This already exists in the current system and is not part of the project scope so should not appear here. In Domain Analysis, paragraph 4: This whole paragraph is definitely not part of the "System currently in place", and they do not need to explain the Swanson paper in so much detail.
Silence	There are no non-functional requirements in their document. The Proposed Goals (Scope) section doesn't clearly specify the stakeholders needs.
Overspecification	In Proposed Goals, paragraph 1: Here there is a bit too much talk about implementation specific features like "...in a new table in the data base" or "...and to have a threshold for correct classifications". In Domain Analysis, paragraph 4: Far too technical description of the Swanson paper and the algorithm. There is no need to include specific mathematical formulae here.
Contradiction	The Gantt chart contradicts the deadlines mentioned in Deliverables 4.2. It seems from 4.2 that the team will finish the implementation of the project by 10/02/2016, but the Gantt chart splits it up into smaller and more realistic parts that are more spread out. Here they have separate deadlines, which contradict the previous text.
Ambiguity	In Overview, paragraph 2: "...as well as providing search functionality." - Unclear what the search functionality entails. FR4.1 and FR4.2 cover this but are worded differently and may cause confusion. In Proposed Goals, paragraph 5: Not clear whether feature is in the scope of the project - "We will also try to implement a user dashboard for the website".
Forward reference	Could not find any occurrences of forward reference in their document, apart from the terms that are defined in the Definition of Terms.
Wishful thinking	In Deliverables 4.2: They say they will finish the implementation of the algorithm and web user/admin front ends by 10/02/2016. This seems like an unrealistic deadline.

Individual Requirements Analysis of Team 5

Requirements Document

The Sin	Section	Explanation
Noise	Overview	- ~~The "remainder of this document" paragraph is fluff, this could have been shortened to a single sentence that goes over the structure of the document without using up as much space.~~ ~~- The first paragraph is supposedly a quote from "(Durham University, 2015)" this is not the specification we have been given, it seems like a semi transcribed from the Mammal Web website summary and it contains many ambiguities as it is not a specification document it is instead used to describe mammal web to the general public.~~
	Domain Analysis	- ~~The Domain Analysis section should not contain anything that would be considered a deliverable, this includes all of the second paragraph as well as paragraphs four and five. These are very well done but are in the wrong section.~~
	Deliverables	- There is a lot of redundant information, such as the explanation of the requirements document, this section is to state the deliverables and give a brief description so as to be able to identify the related part in the solution requirements section.
	Risks	- ~~This section specifically contains a lot of noise, the first paragraph is completely overwritten by the following paragraph, there is also mention of testing the algorithm but not how this will reduce the risk just that it "should be straightforward".~~
	Dependencies	- ~~This paragraph contains a some ambiguous language and terms, "The only dependencies.." first line is obsolete as well as using the the terms "volunteer" and "client" without defining them.~~
	Solution Requirements	- ~~FR 3.1 is not part of the specification and shouldn't be included in this document at all.~~ ~~- FR 1.1, this contains a TBC as part of the exception handling.~~ ~~- FR 4.2 and FR 5.1 are both redundant, they are already incorporated into FR 4.1.~~
Silence	Deliverables	- Team members have been given task outlines in one section of the deliverables where as this has been omitted from the other sections.
	Dependencies	- ~~This does not taking into account, coding skill, the coding language, availability of the database and the ability for their code to be run on it, and finally the hosting of their code.~~
	Solution Requirements	- ~~At no point in this section is coding skill, testing, coding language constraints, or availability of the database mentioned as factors in the functional requirements.~~
	Definition of Terms	- ~~This section is lacking many terms used in the document: "HTTPS", "SQL injections", "Swanson et al", "Spotter", "Administrator", "returned", "Administrative user", "plurality algorithm", "manually parsing", and "classification".~~
~~Over specification~~	~~Overview~~	~~- In paragraph two, "outputs a new table with one,~~ accurate classification" this section is a brief overview and shouldn't go into specifics. ~~This is also apparent in paragraph one, "attached to a tree" this is also unnecessary.~~

	Solution Requirements	- FR 2.2, Expected results, instead of removing the download button it should instead give advice on how to limit the search rather than just remove functionality.
Ambiguity	Overview	- In paragraph two, "images taken from a wildlife reserve" this is not what we have been given, so is therefore wrong.
Forward Referencing	Most Sections	- There are several terms that are not defined, "The reserve", "classification", "administrator", and "table", this could be dealt with by a footer to this specific section saying "for any unknown terms see the Definition of Terms section". This is pervasive throughout the document, although only examples from overview have been used here, more will be specified in the Definition of Terms section of Silence.
Wishful Thinking	Proposed Goals	- Paragraph four goes into detail about the implementation of an algorithm that "decided the likelihood of a photo being shown", this is not part of the specification and should not be included.
	Risks	- The second paragraph contains the idea that the search page of the website will be designed with the help of the client to make sure that it is simple and easy to use, this is presumptuous as this could and should be done without interference of external influences, a search page is user friendly if it works and is easy to get and read the information.
Good	Proposed Goals	- the final part of the third paragraph, "an estimation of the numbers..." this is showing the benefits of the system and outlines them very well.
	Domain Analysis	- The related systems information is very detailed and goes into every aspect of another system very similar and also goes through some issues the system has, as well as commenting on the relevance to the Mammal Web system.
	Deliverables	- The gant chart is well formatted and very specific with regard to dates and deadline times, but has the same issue as a significant part of the deliverables section, it has no team members on specific jobs.
	References	This is a good section as no information is lacking when compared to the information given in the rest of the document and is also well formatted.

Summary

This document contains a lot of the information that it should, in abundant detail, however it may be in the wrong section or lack definition. The detail that is present in most sections of the documents is admirable and is only let down by a lack of formatting, this however will be easily rectified. The gant chart is very well formatted as well as having referenced most of the sources used in a concise and easy to read format.

Requirement Specification Analysis and Appraisal

To: Team Five

Summary:

The requirement specification is tidily formatted and clearly specified. The overall requirement of Group Project is illustrated clearly, though with some ambiguity at some places. The requirement specification can be comprehended by a reader with minor knowledge of the project, but not with much ease.

Sins:

Silence		
1	The introduction of dashboard in overview part is missing	
	Description	~~There are altogether three main functionalities for group project, all three of them are specified in later sections other than in overview section. To not to confuse reader with little acquaintance with the project, it is necessary to introduce the dashboard functionality in overview section.~~
2	~~The risk of database corruption is not specified in sub-section "5.1 Risks"~~	
	~~Description~~	~~When multiple normal users (non-expert & non-administrator) access the same data in the database, it is likely that data corruption is going to occur. Risk considering this aspect is not covered is risk sub-section. And if the group have the idea of avoiding the data~~

		~~corruption, the method should be specified in domain analysis.~~
3	The assumption in sub-section “5.2 Assumptions” is not completely clarified	
	Description	~~The sub-section only clarifies the user condition, but it does not involve other assumptions like data assumption (what kinds of classifications will the system receive when it’s on the run.~~
4	The assumption in sub-section “5.3 Dependencies” is not completely clarified	
	Description	~~The sub-section only clarifies the dependency on user input (classifications on photos from users), but it does not involve the situation on which the system is going to run on, for example, the version of programming languages to be used.~~
5	The constraints in sub-section “5.4 Constraints” is not completely clarified	
	Description	~~The sub-section only clarifies the time constraint which is likely limit the quality of the final product of group project, but it does not involve any constrains in terms of the administration of users when some of them classify photos wrongly on purpose or the database size that the system can handle.~~

Contradiction		
1	Contradiction at sub-section “5.1 Risks” at “main risk” part	
	Description	~~The description of the main risk contradicts with the analysis in sub-section “3.1 MammalWeb: System currently in place” at~~

		~~paragraph 5. The analysis points out that considering normal species, the implementation is straight forward with simply following the criteria provided in Swanson algorithm, but more tests on criteria selection are required when it comes to rare species. However, the main risk shows that there is minor risk on Swanson algorithm implementation.~~

Ambiguity		
1	Ambiguity when referencing the classification system (basic implementation in group project requirement)	
	Description	~~When the classification system is referred to, there is always a different description of it.~~ ~~For example, the first sentence in section "2. Proposed goals (Scope)" refers to the classification system as "a software which can distinguish different species within a photo (if there are any) based on user input". However, the reference goes like this in sub-section "4.2 A Classification and filtering web system", " a webpage or set of webpages that use an implementation of an algorithm to 'decide' when a photo has been classified with certainty". Obviously, both of them are not defined by same meaning and is much likely to bring frustration to readers with little acquaintance with the group project.~~

2	Ambiguity on some terms that have not been defined	
	Description	~~In the description of "FR1.1" in sub-section "6.1 Functional Requirements", calculate matrix is not defined.~~

Forward Reference		
1	Forward Reference on some terms	
	~~Description~~	~~In section "2. Proposed goals (Scope)" paragraph 3 line 1, there is a term "backend interface". This term appears quite a lot in following sections in the form "interface" but has not been described until "FR2.2", "FR4.1" and "FR4.2" in sub-section "6.1 Functional Requirements".~~

Appraisal:

Solving all silence is of the top priority, because this silence leaves the requirement incomplete and is unlikely to solve problems that requires answers.

Ambiguity is of the second priority, because it gives rise to confusion of understanding the fifth part.

Other sins are less vital and can be solved at last.

Appraisal of Team 5 Requirements Specification

Location in Document	Issue	Rationale
1. Overview	Overspecification	~~"Our system will act as a function…each image or a flag" is a sentence that describes the solution to fetching and storing the data, rather than outlining what the system sets out to do.~~
2. Scope	Silence	~~Several of the objectives described do not have the benefits of goal explicitly stated.~~
3. Domain Analysis	Conflict with mark scheme	~~Does not conform to page length.~~
5.1. Risks (Data protection)	Wishful Thinking	There is no reason that images with members of the public need to be taken into consideration by this group, as they are not supplied with the images at any point during the project.
5. Risks, Assumptions, Dependencies and Constraints	Silence	~~Document does not list hardware or software, nor their limitations.~~
6.1 Functional Requirements	Content	~~Requirements were not very precise, they could have been split up so there were more of them, and they were all more specific and dealt with individual specifications of the objectives, rather than sum them up.~~

Overall the Requirements Specification was extremely well written, and each point was explained well, precisely, and in High Level Language. The above points I have made are small issues that could be very quickly resolved. To conclude, it is a clear and thorough document.

Requirement Analysis: Individual Assessment

Team: 5

Overview and justification

'Silence', lack of description about the search (filter) and ~~the download (in .csv format) functions.~~

Could be more precise in the describing of the search (filter) function. ~~A brief introducing of the download (in .csv format) function is also needed.~~ As those functions are also very important part of the project.

Proposed goals (Scope)

'Silence', lack of information of system boundaries as it only covered the species distinguish section of the project. Could add some detailed descriptions of system boundaries in the backend interface of the platform and the dashboard of the website.

'Ambiguity', *'to have a threshold for correct classifications.'* Could be more precise about the threshold as the threshold is a key factor for the whole algorithms. Whether this threshold will implemented as an internal fixed constant or the scientists could vary the threshold on their own needs.

'Silence', the *'Timeline of upload/classification'* function described in the functional requirement section wasn't in the Scope.

Domain Analysis

'Silence' the domain analysis only focus on the algorithms part of the project. As the filter and the download functions are also important to implement, some domain analysis and researches related to the filter/download section would be helpful.

'Overspecification'(?) The Swanson algorithms explanation.

Deliverables

'Noise (redundancy)' Some of the information in this section has already been fully covered in the Scope.

Risk, Assumptions, Dependencies and Constraints

'Silence', the potential risk would involve runtime risks and client side risks as well, for example deliberate wrong classifications by users etc.

Solution Requirements

'Contradiction', In FR1.1, 'number of animals' wasn't mention in the Scope of the spec. The term mentioned in other part of the specification was 'number of different species'/ 'number of classifications'. This could lead to an ambiguity. A more precise description would be helpful for the reader to understand the accurate term and result to be measured and output.

'Silence', the Scope mentioned to *'implement a threshold for correct classifications'*, this should be added into the functional requirements.

'Ambiguity', In FR2.2, *'Button only becomes available if data has been searched and filtered.'* Could be described more detailed in the Scope, for example what exception does this function has prevented.

In FR4.2, *'The system should be able to show the user a table of images taken at sites where the sites where the sites have been filtered'*. Typo.

Definition of Terms

'Ambiguity'/ 'Silence', abbreviation *'TBC'* not included. Would be helpful to add the definition of TBC as the template ask to put all abbreviations' definition.

References

Clearly written.

Summary

The whole structure of this requirement specification conforms to the template, the style is clear and the language used is accurate. There was a clear match between this requirement specification and the actual tasks we had been addressed. In the domain analysis, there was a detailed explanation of the algorithm which shows the depth of the related research.

The 'Silence'/ 'Ambiguity' terms identified in this report could be some of the technical areas that haven't been reached or discussed yet by the group at this outset stage of the project.