

1 Annotation Guidelines

1.1 Task 1 Definitions

Claim A claim is a single sentence expressing information (true or mutated) about a single aspect of one target entity. Using only the source sentence to generate claims will result in simple claims that are not challenging. But, allowing world knowledge to be incorporated is too unconstrained and will result in claims that cannot be evidenced by this dataset. We address this gap by introducing a dictionary that provides additional knowledge that can be used to increase the complexity of claims in a controlled manner.

Dictionary Additional world knowledge is given to the annotator in a dictionary. This allows for more complex claims to be generated in a structured manner by the annotator. This knowledge may be incorporated into claims or may be needed when labelling whether evidence supports or refutes claims.

Mutation True claims will be distorted or mutated as part of the claim generation workflow. This may be achieved by making the sentence negative, substituting words or ideas or by making words more or less specific. The annotation system will select which type of mutation will be used.

Requirements:

- Claims must reference the target entity directly and avoid use of pronouns/nominals (e.g. he, she, it, the country)
- Claims must not use speculative/cautious/vague language (e.g. may be, might be, it is reported that)
- True claims should only be facts that can be deduced by information given in the source sentence and dictionary
- Minor variations over the entity name are acceptable: (e.g. Amazon River vs River Amazon)

Examples of true claims:

- Keanu Reeves has acted in a Shakespeare play
- The Assassin's Creed game franchise was launched in 2007
- Prince Hamlet is the Prince of Denmark
- In 2004, the coach of the Argentinian men's national field hockey team was Carlos Retegui

1.2 Task 1 (subtask 1) Guidelines

The objective of this task is to generate true claims from this source sentence that was extracted from Wikipedia.

- Extract simple factoid claims about entity given the source sentence.
- Use the source sentence and dictionary as the basis for your claims.
- Reference any entity directly (i.e. pronouns and nominals should not be used)
- Minor variations of names are acceptable (e.g. John F Kennedy, JFK, President Kennedy).
- Avoid vague or cautions language (e.g. might be, may be, could be, is reported that)
- Correct capitalisation of entity names should be followed (India, not india).
- Sentences should end with a period.
- Numbers can be formatted in any appropriate English format (including as words for smaller quantities).

Guidelines

The objective of this task is to **generate true claims** from this source sentence that was extracted from Wikipedia.

- **Extract simple factoid claims about Socialist feminism** given the source sentence
- Use the **source sentence and dictionary** as the basis for your claims.
- **Reference any entity directly** (pronouns and nominals should not be used).
- Minor variations of names are acceptable (e.g. John F Kennedy, JFK, President Kennedy).
- **Avoid vague or cautions language** (e.g. might be, may be, could be, is reported that)
- Correct capitalisation of entity names should be followed (India rather than india).
- Sentences should end with a period.
- Numbers can be formatted in any appropriate English format (including as words for smaller quantities).
- Some of the extracted text might not be accurate. These are still valid candidates for summary. It is not your job to fact check the information

World Knowledge

- **Do not** incorporate your own knowledge or beliefs.
- Additional Knowledge is given to you in the dictionary. This dictionary contains additional information that may be helpful in making more complex claims.
(we prefer you to use the dictionary because this information can be backed up from Wikipedia)
- If the source sentence is not suitable, leave the box blank to skip.
- If a dictionary entry is not suitable or uninformative, ignore it.

Generating Claims About

Socialist feminism

Source Sentence

This is the sentence that is used to substantiate your claims about Socialist feminism

Socialist feminists thus consider how the sexism and gendered division of labor of each historical era is determined by the economic system of the time.

[Show Context](#)

Dictionary

Click the word for a definition. These definitions can be used to support the claims you write or make the claims more complex by making a deduction using the dictionary definitions

The dictionary comes from the blue links on Wikipedia. This may be empty if the passage from Wikipedia contains no links.

Economy

True Claims (one per line)

Aim to spend about 2 minutes generating **2-5** claims from this source sentence

If the source sentence is uninformative, press the skip button

[Example](#)

[Submit Claims](#) [Skip](#) [Home](#)

Figure 1: Screenshot of annotation task 1 (subtask 1)

- Some of the extracted text might not be accurate. These are still valid candidates for summary. It is not your job to fact check the information

World Knowledge

- Do not incorporate your own knowledge or beliefs.
- Additional world knowledge is given to the you in the form of a dictionary. Use this to make more complex claims (we prefer using this dictionary instead of your own knowledge because the information in this dictionary can be backed up from Wikipedia)
- If the source sentence is not suitable, leave the box blank to skip.
- If a dictionary entry is not suitable or uninformative, ignore it.

1.3 Task 1 (subtask 1) Examples

See Tables 1 and 2 for examples from the real data.

1.4 Task 1 (subtask 2) Guidelines

The objective of this task is to generate modifications to claims. The modifications can be either true or false. You will be given specific instructions about the types of modifications to make.

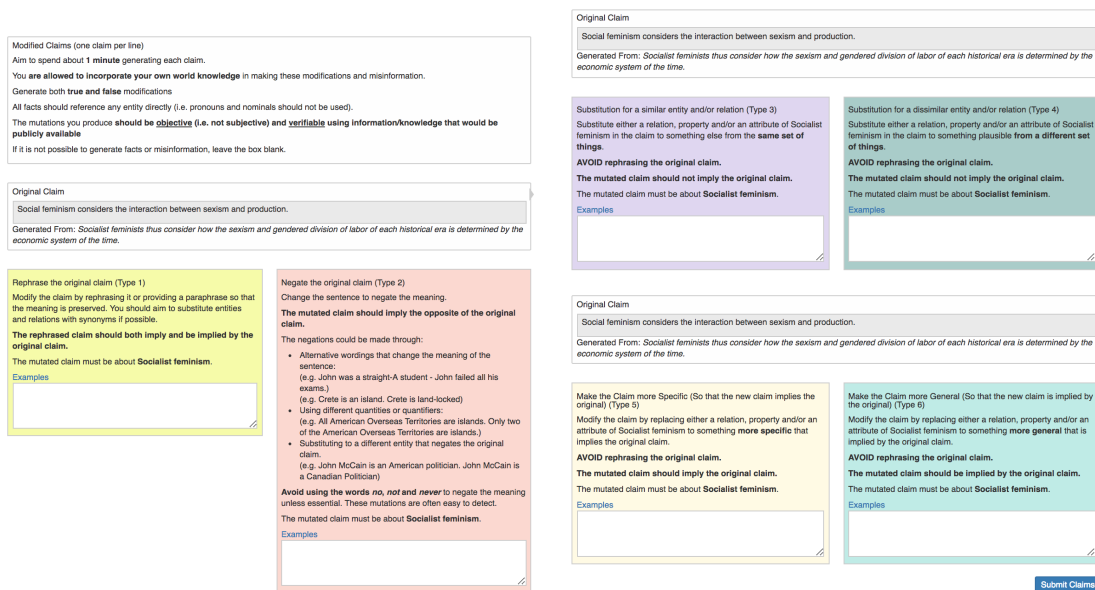
- Use the original claims and dictionary as the basis for your modifications to facts about entity
- Reference any entity directly (i.e. pronouns and nominals should not be used)
- Avoid vague or cautions language (e.g. might be, may be, could be, is reported that)
- Correct capitalisation of entity names should be followed (India, not india).

Entity	INDIA
Source Sentence	It shares land borders with Pakistan to the west; China, Nepal, and Bhutan to the northeast; and Myanmar (Burma) and Bangladesh to the east.
Dictionary	<p>Bhutan Bhutan, officially the Kingdom of Bhutan, is a landlocked country in Asia, and it is the smallest state located entirely within the Himalaya mountain range.</p> <p>China China, officially the People’s Republic of China (PRC), is a unitary sovereign state in East Asia and the world’s most populous country, with a population of over 1.381 billion.</p> <p>Pakistan Pakistan, officially the Islamic Republic of Pakistan, is a federal parliamentary republic in South Asia on the crossroads of Central and Western Asia.</p>
Claims	<ul style="list-style-type: none"> - One of the land borders that India shares is with the world’s most populous country. (uses information from the dictionary entry for china) - India borders 6 countries. (summarises some of the information in the source sentence) - The Republic of India is situated between Pakistan and Burma. (deduced by Pakistan being West of India, and Burma being to the East)

Table 1: Task 1 (subtask 1) example: India

Entity	CANADA
Source Sentence	Canada is sparsely populated, the majority of its land territory being dominated by forest and tundra and the Rocky Mountains.
Dictionary	<p>Province of Canada The United Province of Canada, or the Province of Canada, or the United Canadas was a British colony in North America from 1841 to 1867.</p> <p>Rocky Mountains The Rocky Mountains, commonly known as the Rockies, are a major mountain range in western North America.</p> <p>tundra In physical geography, tundra is a type of biome where the tree growth is hindered by low temperatures and short growing season.</p>
Claims	<ul style="list-style-type: none"> - The terrain in Canada is mostly forest and tundra. - Parts of Canada are subject to low temperatures. - Canada is in North America. - In some areas of Canada, it is difficult for trees to grow.

Table 2: Task 1 (subtask 1) example: Canada



(a) (b)
 Figure 2: Screenshots of annotation task 1 (subtask 2)

- Sentences should end with a period.
- Numbers can be formatted in any appropriate English format (including as words for smaller quantities).
- Some of the extracted text might not be accurate. These are still valid candidates for summary. It is not your job to fact check the information

Specific guidelines for this screen

- Aim to spend about up to 1 minute generating each claim.
- You are allowed to incorporate your own world knowledge in making these modifications and misinformation.
- All facts should reference any entity directly (i.e. pronouns and nominals should not be used).
- The mutations you produce should be objective (i.e. not subjective) and verifiable using information/knowledge that would be publicly available
- If it is not possible to generate facts or misinformation, leave the box blank.

There are six types of mutation the annotator will be asked to introduce. These will all be given on the same annotation page as all the claim modification types are related.

1. Rephrase the claim so that it has the same meaning
2. Negate the meaning of the claim
3. Substitute the verb and/or object in the claim to alternative from the same set of things
4. Substitute the verb and/or object in the claim to alternative from a different set of things
5. Make the claim more specific so that the new claim implies the original claim (by making the meaning more specific)

Type	Claim	Rationale
Rephrase	President Obama visited some places in the United Kingdom.	Rephrased. Same meaning.
Negate	Obama has never been to the UK before.	Obama could not have toured the UK if he has never been there.
Substitute Similar	Barack Obama visited France.	Both the UK and France are countries
Substitute Dissimilar	Barrack Obama attended the Whitehouse Correspondents Dinner.	In the claim, Barack Obama is visiting a country, whereas the dinner is a political event.
More specific	Barrack Obama made state visit to London.	London is in the UK. If Obama visited London, he must have visited the UK.
More general	Barrack Obama visited a country in the EU.	The UK is in the EU. If Obama visited the UK, he visited an EU country.

Table 3: Example mutations

- Make the claim more general so that the new claim can be implied by the original claim (by making the meaning less specific)

It may not always be possible to generate claims for each modification type. In this case, the box may be left blank.

1.5 Task 1 (subtask 2) Examples

The following example illustrates how given a single source sentence, the following mutations could be made and why they are suitable. For the claim “*Barack Obama toured the UK.*”, Figure 3 shows the relations between objects, and Table 3 contains examples for each type of mutation.

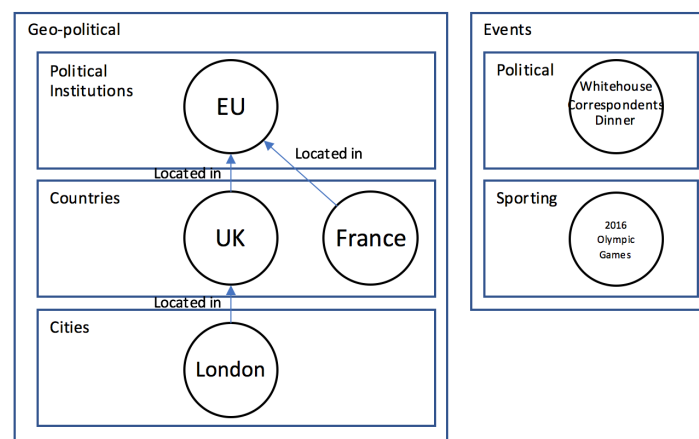


Figure 3: Toy ontology to be used with the provided examples of similar and dissimilar mutations

1.6 Task 2 Guidelines

The purpose of this task is to identify evidence from a Wikipedia page that can be used to support or refute simple factoid sentences called claims. The claims are generated by humans (as part of the WF1 annotation workflow) from a Wikipedia page. Some claims are true. Some claims are fake. You must find the evidence from the page that supports or refutes the claim.

Other Wikipedia pages will also provide additional information that can serve as evidence. For each line, we will provide extracts from the linked pages in the dictionary column which appear when you “Expand” the sentence. The sentences from these linked pages that contain relevant supplementary information should be individually selected to record which information is used in justifying your decisions.

Step-by-step guide:

1. Read and understand the claim
2. Read the Wikipedia page and identify sentences that contain relevant information.
3. On identifying a relevant sentence, press the Expand button to highlight it. This will load the dictionary and the buttons to annotate it:
 - (a) If the highlighted sentence contains enough information in a definitive statement to support or refute the claim, press the Supports or Refutes button to add your annotation. No information from the dictionary is needed in this case (this includes information from the main Wikipedia page). Then continue annotating from step 2.
 - (b) If the highlighted sentence contains some information supporting or refuting the claim but also needs supporting information, this can be added from the dictionary.
 - i. The hyperlinked sentences from the passage are automatically added to the dictionary
 - ii. If a sentence from the main Wikipedia article is needed to provide supporting information. Click “Add Main Wikipedia Page” to add it to the dictionary.
 - iii. If the claim or sentence contains an entity that is not in the dictionary, then a custom page can be added by clicking “Add Custom Page”. Use a search engine of your choice to find the page and then paste the Wikipedia URL into the box.
 - iv. Tick the sentences from the dictionary that provide the minimal amount of supporting information needed to form your decision. If there are multiple equally relevant entries (such as a list of movies), then just select the first. Once all required information is added, then press the Supports or Refutes button to add your annotation and continue from step 2.
 - (c) If the highlighted sentence and the dictionary do not contain enough information to support or refute the claim, press the Cancel button and continue from step 2 to identify more relevant sentences.
4. On reaching the end of the Wikipedia page. Press Submit if you could find information that supports or refutes the claim. If you could not find any supporting evidence, press Skip then select Not enough information

The objective is to find sentences that support or refute the claim.

You must apply common-sense reasoning to the evidence you read but avoid applying your own world-knowledge by basing your decisions on the information presented in the Wikipedia page and dictionary.

As a guide - you should ask yourself:

If I was given only the selected sentences, do I have stronger reason to believe claim is true (supported) or stronger reason to believe the claim is false (refuted). If I’m not certain, what additional information (dictionary) do I have to add to reach this conclusion.

1.7 Task 2 Examples

1.7.1 What does it mean to Support or Refute a claim

The following count as valid justifications for marking an item as supported/refuted:

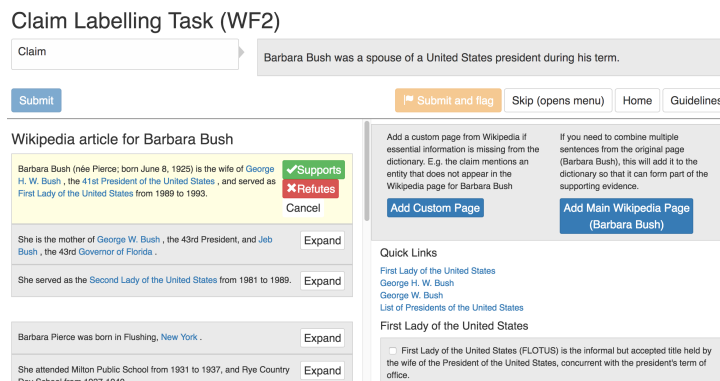


Figure 4: Screenshot of annotation task 2

Sentence directly states information that supports/refutes the claim or states information that is synonymous/antonymous with information in the claim

Claim: Water occurs artificially

Refuted by: "It also occurs in nature as snow, glaciers ..."

Claim: Samuel L. Jackson was in the third movie in the Die Hard film series.

Supported by: "He is a highly prolific actor, having appeared in over 100 films, including Die Hard 3."

Sentence refutes the claim through negation or quantification

Claim: Schindler's List received no awards.

Refuted by: "It was the recipient of seven Academy Awards (out of twelve nominations), including Best Picture, Best Director..."

Sentence provides information about a different entity and only one entity is permitted (e.g. place of birth can only be one place)

Claim: David Schwimmer finished acting in Friends in 2005.

Refuted by: "After the series finale of Friends in 2004, Schwimmer was cast as the title character in the 2005 drama Duane Hopwood."

Sentence provides information that, in conjunction with other sentences from the dictionary, fulfils one of the above criteria

Claim: John McCain is a conservative.

Refuted by: "He was the Republican nominee for the 2008 U.S. presidential election." AND "The Republican Party's current ideology is American conservatism, which contrasts with the Democrats' more progressive platform (also called modern liberalism)."

Adding Main Wikipedia Page to Dictionary In the case where the claim can be supported from multiple sentences from the main Wikipedia page, information the main Wikipedia page should be added to the dictionary to add supporting information. This is because each line that is annotated in the left column for the main Wikipedia page is stored independently.

Claim: George Washington was a soldier, born in 1732.

Wikipedia page: George Washington

Sentence 1: George Washington was an American politician and soldier who served as the first President of the United States from 1789 to 1797 and was one of the Founding Fathers of the United States.

Sentence 2: In 1775, the Second Continental Congress commissioned him as commander-in-chief of the Continental Army in the American Revolution.

Sentence 3: The Gregorian calendar was adopted within the British Empire in 1752, and it renders a birth date of February 22, 1732.

Sentence 1 contains enough information to wholly support the claim without the need for any additional information.

Sentence 2 and 3 contain partial information that can be combined. Expand sentence 2 and click add main Wikipedia page to add the Wikipedia page to add George Washington to the dictionary. Sentence 3 can now be added to dictionary to support the claim.

The order of the sentences doesn't matter (selecting sentence 2+3 is the same as adding sentence 3+2) because we sort the sentences in document order. This means that you only need to annotate this once.

If you attempt to add the main Wikipedia page to the dictionary from sentence 3 having already used it for sentence 2, the system will warn you that you are making a duplicate annotation.

1.7.2 Adding Custom Pages

You may need to add a custom page from Wikipedia to the dictionary. This may happen in cases where the claim discusses an entity that was not in the original Wikipedia page

Claim: Colin Firth is a Gemini. In Original Page: "Colin Firth (born 10 September 1960)... " Requires Additional Information from Gemini: "Under the tropical zodiac, the sun transits this sign between May 21 and June 21."

Tense The difference in verb tenses that do not affect the meaning should be ignored.

Claim: Frank Sinatra is a musician Supported: He is one of the best-selling music artists of all time, having sold more than 150 million records worldwide.

Claim: Frank Sinatra is a musician Supported: Francis Albert Sinatra was an American singer

1.7.3 Skipping

There may be times where it is appropriate to skip the claim by pressing the Skip button:

- The claim cannot be verified using the information with the information provided:
 - If the claim could potentially be verified using other publicly available information. Select Not Enough Information
 - If the claim can't be verified using any publicly available information (because it's ambiguous, vague, personal or implausible) select The claim is ambiguous or contains personal information
 - If the claim doesn't meet the guidelines from WF1, select: The claim doesn't meet the WF1 guidelines
- The claim contains typographical errors, spelling mistakes, is ungrammatical or could be fixed with a very minor change
 - Select The claim has a typo or grammatical error

Keep in mind that clicking Not Enough Information or The claim is ambiguous or contains personal information is still very useful feedback for the AI systems. They need examples of what a verifiable claim looks like, and negative examples are as useful (if not more so) than positive ones!

1.8 Task 2 additional guidelines

After conferring with the organizers, the annotators expanded the guidelines to include common case that were not explicitly covered in the guidelines:

1. Any claims involving "many", "several", "rarely", "barely" or other indeterminate count words are going to be ambiguous and can be flagged.
2. Same goes for "popular", "famous", and "successful (for people, for works we can assume commercial success)"
3. We cannot prove personhood for fictional characters like we can for real people (dogs and cats can be authors, actors, and citizens in fiction)

4. If a claim is “[Person] was in [film]”, the only way to refute it would be (a) if they were born after it was released, or (b) their acting debut is mentioned and occurs a realistically long enough amount of time after the film’s release (at least a few years).
5. A list of movies that someone was in or jobs a person held is not necessarily exclusive, we cannot refute someone being a lawyer because the first sentence of their wiki article says they were an actor.
6. A person is not their roles, if a claim is something like “Tom Cruise participated in a heist in Mission Impossible 3”, we cannot prove it, because Ethan Hunt did that, not Tom Cruise.
7. Our workflow is time-insensitive, but if a claim tags something to a time period, we can treat it as such. “Neil Armstrong is an astronaut” can be supported, but “Neil Armstrong was an astronaut in 2013” can be refuted, because he was dead at the time.
8. If someone won 5 Academy Awards, they won 3 Academy Awards. Similarly, if they won an Academy Award, they were nominated for an award.
9. Multiple citizenships can exist.
10. If a claim says “[Person] was in [film] in 2009”, then the film’s release date can support it. If the claim is “[Person] acted in [film] in 2009”, filming dates or release dates can prove it.
11. Flag anything related to death, large-scale recent disasters, and controversial religious or social statements.

2 Manual Error Analysis

The manual error analysis was conducted with the decision process described in Figure 5. For the cases of finding new evidence, recommended actions have been listed. While these were not performed for this version of the dataset, this may form a future update following a pool-based evaluation in the FEVER Shared Task.

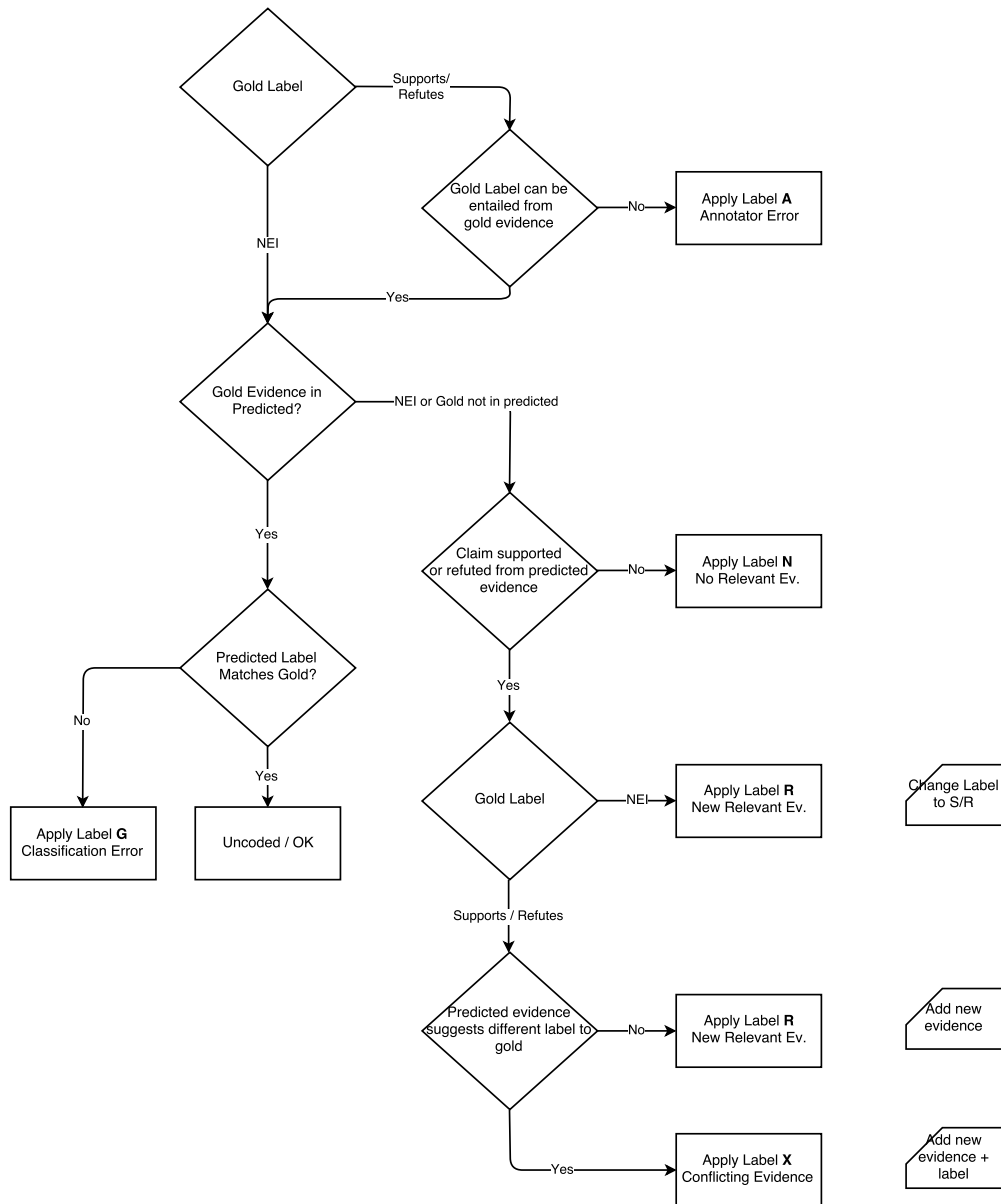


Figure 5: Manual Error Coding Process