Data Science for Social Good

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ABSTRACT

In this paper, we present an analysis of data provided by Grameen America. Our analysis was based on attempting to understand the reasons as to why former Grameen America members decided to not renew their loan and terminate their membership. To do so, we decided to analyze member feedback comments from the exit survey form data provided to us from Grameen America. Our analysis consisted of three different NLP (Natural Language Processing) tasks: Clustering Sentences, Sentiment Analysis, and Keyword Extraction.

DATA

The data is collected from the Grameen America exit survey after recipients have received their loans. The data records the start and end time it took for them to take the survey, whether they would renew the loan, if they have met with their representatives, the date scheduled to get the loan, the expected date to get the loan, reason for not renewing the loan, the Grameen branch where they got the most recent loan, how likely they would recommend Grameen to friends or family, and other comments. There were two datasets provided: one in English and the other in Spanish. Since we planned to perform NLP analysis on the datasets to understand the results better, we translated the Spanish dataset results to English. It is also important to note that the results may be biased since participation in the survey is voluntary. There is a likely chance that those who feel strongly about the program will respond to the survey.

INITIAL ANALYSIS

Preliminary analysis was performed on that data to get a better understanding of the results. Initial analysis included looking at the average rating and percentage renewal by state. This was done by loading the Spanish dataset only into a data frame. The data is then grouped by state based on the Grameen branch location response that was provided in the survey. The average rating and percentage renewal were then calculated based on the groups. Figure 1 shows the results of this analysis. We can see that Grameen branch locations in Massachusetts performed the best in comparison to the other locations. Although Connecticut and Illinois had the lowest ratings and percentages, it should be noted that this was only one response. The count column refers to the number of responses from each location.

State	Count	Average Rating	Percent Renew
California	119	8.56302521	75.6302521
Connecticut	1	2	0
Florida	16	8.0625	56.25
Illinois	1	5	0
Indiana	27	8.851851852	81.48148148
Massachusetts	15	9.866666667	86.66666667
Nebraska	5	8.2	100
New Jersey	51	8.941176471	80.39215686
New York	281	8.241992883	73.30960854
North Carolina	60	9.716666667	76.66666667
Texas	39	8.743589744	51.28205128

Figure 1: Average rating and percentage renewal grouped by state

Additionally, there were advantages and disadvantages of having a dataset with so few results. Since there were a couple hundred results, it was reasonable enough for us to sit down and read through each result. However, this may cause less accurate results when performing our analysis. Upon initial glance, we noticed that representatives and meetings were popular reasons for why people choose not to renew their loans. However, for the people that used meetings as a reason, the majority of the people rated a 10 for how likely they are to recommend the Grameen program. Further analysis was made using NLP techniques.

There were other visualizations that were produced from the dataset provided. Figure 2 and 3 show how likely people are to recommend the Grameen program and reasons why they chose to leave the program. We classified the reasons why people chose to leave the program into 8 different categories: meeting, representative, loans/payments, moved, group/center, seasonal business, health/personal, and Grameen changes. Meeting was the largest category with 51 responses. However, when looking at those 51 responses, the majority of those people rated a 10 out of 10 for how likely they are to recommend the program. In comparison to the second largest reason why people chose to leave Grameen, representatives, only 2 out of the 38 people rated a 10 for how likely they were to recommend Grameen.
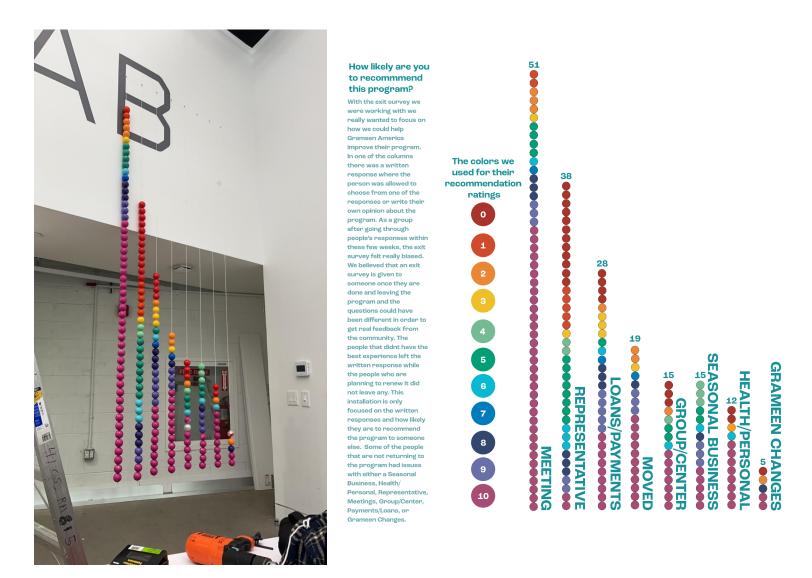
Figure 2 and 3: Physical and digital visualization showing why people chose to leave Grameen and how likely they are to recommend the program on a scale from 0 to 10 along with the different labels we came up with that describe the reason for their departure

To take a closer look at the numerical ratings, a visualization was produced as shown in Figure 4. A scale from 0 to 10 was used for how likely they are to recommend Grameen. The top represents a rating of 10, while the bottom represents a rating of 0. Overall the people that responded to the survey were satisfied with the program. Out of the 771 responses, 699 of the responses had a rating of 5 or higher. The largest group rating was a 10, which had 501 responses.
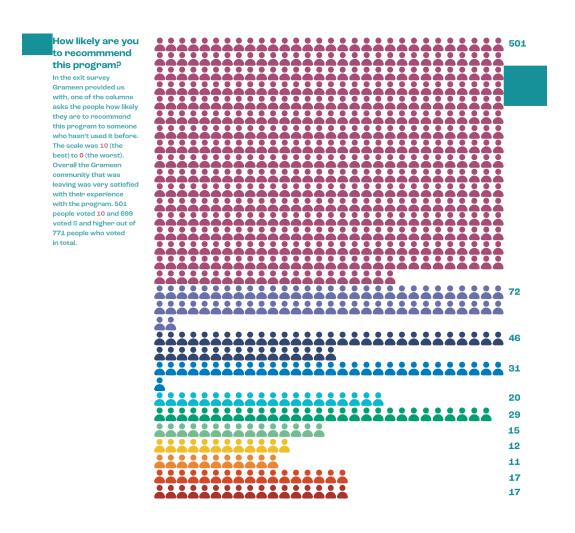

Figure 4: Results for how likely people are to recommend Grameen from 0 (worst) to 10 (best)

Another way of looking at satisfaction is how many people are planning on renewing their loans. As shown in Figure 5, 571 responses were yes. More than half of the responses showed that people would want to renew their loans.
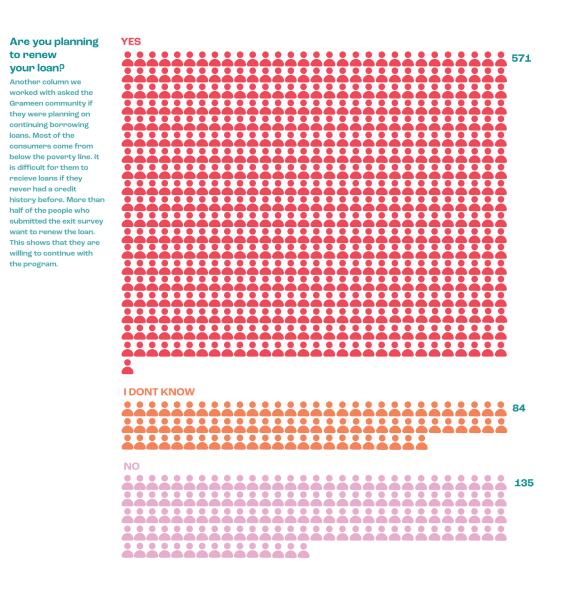

Are you planning to renew your loan?

Another column we worked with asked the Grameen community if they were planning on continuing borrowing loans. Most of the consumers come from below the poverty line. It is difficult for them to recieve loans if they never had a credit history before. More than half of the people who submitted the exit survey want to renew the loan. This shows that they are willing to continue with the program.

YES 571

I DONT KNOW 84

NO 135

Figure 5: Results for renewing loan

METHODS

Translation

Many of the comments were written in Spanish. Therefore, we utilized the "Google Translate API" on python, googletrans, in order to translate data from Spanish to English before the analysis. The translation was applied to the questions, 'Please tell us the top reason why you are not renewing your loan. If you do not see the reason, or if there is another reason, select 'Other' and tell us why you do not plan to renew your loan.' and 'Is there any other comment you would like to share with us before you submit your answers?'

Clustering

For our analysis, we first decided to encode the feedback comments by using a BERT (Bidirectional Encoder Representations from Transformers) model. BERT is a transformer language model that is trained to predict if a chosen next sentence was probable given the first sentence. As a result of this, it is able to learn contextual embeddings from words.

Then, we decided to perform word embedding on the comments data. Word embedding is a process that maps words or phrases to vectors of real numbers called embeddings. Afterwards, we used K-means clustering to group similar sentences together. K-means clustering is a method of vector quantization that attempts to partition n observations into k clusters where each observation belongs to the cluster with the nearest mean. We experimented with choosing the optimal amount of clusters to have and concluded that having three clusters would be best.

Sentiment Analysis

Next, we performed sentiment analysis on the comments. Sentiment analysis is a method using NLP (Natural Language Processing) to determine the emotion expressed in the text. We implemented sentiment analysis by utilizing the pipeline class to analyze the comments through the default sentiment analysis model in Python. Each comment is labeled as being either "Negative" or "Positive", and an associated score is provided for each. The scores represent the accuracy in predicting the labels, and so scores closer to one are more accurate.

Keyword Extraction

In regards to getting the keywords from the sentences, we decided to use RAKE (Rapid Automatic Keyword Extraction. As the acronym implies, RAKE is a very fast NLP method of extracting keywords from individual documents by identifying key phrases in text through analyzing the occurrence of a word and its compatibility with other words in the text (co-occurrence). It is built on the observation that keywords may consist of multiple informative content words as opposed to having punctuation and stopwords that other traditional methods employ. RAKE can be applied to new fields very easily and is very effective in dealing with multiple types of documents, especially text that requires specific grammatical conventions.

Other methods (LDA, Bag of Words, TFIDF)

In addition to the models mentioned above, we tried other analyses on the dataset, but these did not provide meaningful conclusions. For these methods, preprocessing of the data was necessary. The data used for these analyses was taken from the "Please tell us the top reason why you are not renewing your loan. If you do not see the reason, or if there is another reason, select 'Other' and tell us why you do not plan to renew your loan." column. Because this focused on participants' word responses the preprocessing included removing stopwords, lemmatization, and removing punctuation.

The first model that we tried was LDA or latent Dirichlet allocation. This model allows observations to be grouped based on similarities. The hope for this model was to see if there were any common reasons that came up for why people chose to not renew their loans. To use this model, you need to convert the data from a list of documents to a document term matrix. The document term matrix is the list of documents or corpus in a dictionary. After you have the document term matrix, you can create the LDA model object from the genism library. In this case, the model was trained to output three topics. The three topics were as follows:

```
[(0,
  '0.017*"right" + 0.012*"renew" + 0.012*"working" + 0.010*"never" +
0.010*"take" + 0.010*"payment" + 0.009*"work" + 0.009*"time" +
0.009*"thank" + 0.009*"meeting"'),
 (1,
  '0.024*"representative" + 0.018*"center" + 0.015*"meeting" + 0.015*"bad"
+ 0.013*"respect" + 0.013*"group" + 0.013*"work" + 0.013*"payment" +
0.011*"reason" + 0.011*"make"'),
```

```
 (2,'0.019*"time" + 0.017*"payment" + 0.015*"meeting" +
0.014*"representative" + 0.013*"cant" + 0.011*"pay" + 0.010*"attend" +
0.010*"money" + 0.010*"moment" + 0.009*"debt"')]
```

0, 1 and 2 corresponds to a topic. However, it was hard trying to label these groups. A reason for these results could be the lack of data because the question for asking why they did not renew their loan had the field for other and the participants probably did not write anything in that field.

Bag of words was attempted, but this only counts the frequency of the words. The top words were Grameen, loan, representative, meeting and payment. However, this gave vague results so TFIDF was attempted. This is because TFIDF takes into consideration the documents in the corpus, instead of only frequency. TFIDF determines how important a particular word is to a document. The hopes of this method was to find keywords with high importance for why people choose to not renew their loans. However, upon looking at the result, the top 6 words and its weight are:

```
Loan, 0.287121968

Grameen, 0.242949357

Meetings, 0.220863052

Payments, 0.198776747

Time, 0.176690442

Representative, 0.154604137
```

These results can be meaningful in some ways but are very broad. It is also important to note that the words loan and Grameen could be removed from the documents before trying TFIDF since they are not reasons why people choose not to renew their loan.

RESULTS

Clustering Results

Sample results from performing K-Means Clustering are shown below. We performed the analysis on a set of 100 sentences in which 76 of those sentences were translated since they were originally in Spanish and the remaining 24 were in English. Given the rather small dataset, we experimented with cluster sizes of 3, 4, and 5. Shown below is the output from when we set our cluster size to 5 along with the amount of sentences in each cluster. We realized that as we increased the number of clusters, the number of different categories of data can become more clear and specific. In this particular example, we were able to clearly categorize the clusters to: Payment/Loan Issues, Specified Personal Reasons, Unspecified Personal Reasons, Administrative Issues, and Poor Representative Treatment. However, by the same token, we also discovered that this may result in a slight loss in accuracy. For instance, the sentence 'They stole 400 dollars from me', seems displaced in the cluster that is labeled Specified Personal Reasons when it is probably better off being placed in the Cluster called Payment/Loan Issues. In contrast, having a smaller amount of clusters would allow for each cluster to have more general and even unrelated data to be placed in one group. Nonetheless, this could lead to there being data that is more accurate since each group could be labeled generally. For instance, Specified Personal Reasons and Unspecified Personal Reasons could possibly be grouped together as a result of a lower cluster amount, and so this cluster could be labeled as just Personal Reasons.

Cluster 1: Payment/Loan Issues

["My business is seasonal and depends on the weather, so I don't need another loan right now",
'At this moment I am not in need of money but possibly in the future I will occupy it. Very
grateful for the good treatment you gave me while I was with you', 'I had to wait too long for a
loan', 'There was COVID but I made my payments late, the members of my group paid my debt
but until this moment I am paying off my debt.', "Whenever I had a question, he was never there
for me and when i had covid I asked him to please measure the chance of missing my payment or
paying less for 3 weeks because he had to stop working and he said no and he never answered
me separately, he is an arrogant man without education, that's why I don't think I'll take the loan
anymore", 'My Center did not want to sign for my loan', "I couldn't make my weekly payments",
'I could not make my payment, I lost my cell phone and my bank card and they told me that I had
to wait for them to approve me.', 'I am seeing how to do it because I work and the schedule I
have does not allow me to be there', "I wanted more money, but according to Grameen's rules,
my application was not approved", "It doesn't seem fair to me that I should pay a debt that
someone else hasn't done, plus they ruined my credit for reporting me twice with the same loan...
apart from the fact that in the pandemic I made my payments on time and even so they would
report me as late payments... I prefer to make loans with banks", 'It is too Modesto, the state
every week in the meetings is extreme, the requirements of demonstrations of what is being
negotiated, I think I wasted a lot of time, and felt incapable as if I were a child, taken by the hand
in other words, it is enslavement. Thank you for the loan of 1,500 but no.', "I'm want to work and
but they won't let us use the phone", "If I plan to renew it, I'm just waiting to finish the process
for my own house and Grameen was affecting my credit report, but I plan to renew it at the right
time", 'my financial situation is stable i dont need a loan right now', 'I can not renew because it
another place loaned to me thank you.', "The hours don't work for me", 'I no longer want to
because I feel that they are very abusive with the treatment of us by the representatives of
greemen since they use the too many rules to intimidate you for the loans so I decided not to
carry more with that stress that they were causing me.', "Grameen is not worth taking another
loan. They damaged my credit several times since the first loan I took. I won't recommend it to
anyone. And the loans are for low amounts.", "It doesn't seem to me that we have to waste so
much time in one day just to say how much we pay, if the reason is to undertake and help, we
should send a photo of the payments and now, I don't understand why they make us attend a
meeting for an hour or more just to state what we pay. ", 'Grameen has already helped me a lot
and I have already grown with the money they lent me, thank you very much because now I can
get ahead without any loan.', 'I have several loans and I feel i have been bad and it is not helping
me to make credit, and the reasons gramen give me do not satisfy me.', 'I had no way to pay my
business went bankrupt already', "They stole 396 dollars from me and I'm still waiting for them
to solve it but it's very bad service and I don't recommend it to anyone", "It is not very pleasant
that people decide whether to give you the loan or not, when I explained why I will not attend the

meetings, then I asked permission to return and they accepted, after they decided not to, the center should To take action on the matter since I never defaulted on my payments, my investments were higher than the loan and they let the women decide, when I think there is a lot of selfishness in some of them, and they think they have the Total right. They should remove that rule since the Center, don't know how to say the representatives of Granme are capable of making that decision.", "I don't like the way they handle the payments", "I like zoom meetings but I'm not used to sitting for 40 minutes and I feel that my time being at home and attending meetings can be more productive for me if I just spend my time sitting listening to the instructions of the representative. This is not to say that they are not important, but my time is too.", "I don't understand if we are adults, why should we be reminded each of the members to make their payments, if when they want the loan they don't have to be reminded. representatives also come back who were bad before and then the boss will be drawing attention to the representatives since he gives them another opportunity. for that reason I did not want to be in the group anymore I'm sorry if I'm a bit direct but if they look bad once I don't think they reflect well and now I am calm without pressure thank you very much for all grameen America for the opportunity you gave me.", "My business is seasonal and depends on the weather, so I don't need another loan right now", 'I wanted more money, but was unable to increase my loan amount', "4 of 40 members of my grupo didn't want to sign my loan", 'I was unable to make my weekly payments', 'The loan amounts are too small and there is no option to pay off loan earlier than planned.', 'My representative told me that the Executive people did not want me to get the loan anymore']

Total number of sentences in cluster: 34

Cluster 2: Specified Personal Reasons

['For my health', 'No ?? I have work', 'I will have surgery on my knee soon', 'I have moved and am not sure if Grameen operates in the area of my new address (contact your Grameen representative or branch manager for alternative options)', "I started working and unfortunately I can't attend the meetings", "I moved to Baltimore and I don't know if there are centers here", "I am still interested in participating in Grameen, but I would need a different day or time to attend the meetings, and I don't know how to do it (contact your Grameen representative or the manager of branch for alternate options)", "I'll take a break for health", 'My representative changed, and preferred my old representative', 'The possibility that the meetings will be witnessed', "I'm out of the country right now", 'I was able to get the money elsewhere', "They operate on me and I don't have a job for now until my eyes recover", 'I am working out of state', "I'm waiting for my Grameen card", 'I closed the place but if buisness picks up, I will look for you and thanks for helping me', 'They stole 400 dollars from me', "I started working and I can't use my cell phone much", 'I changed jobs that generate more income', 'I invest the Loans I have had in my business

and for now I have a good stocked inventory.', "I am still interested in participating in Grameen, but I would need a different day or time to attend the meetings, and I don't know how to do this (please contact your Grameen representative or branch manager for alternative options)", 'I needed a break relocated and just need some time to revamp my business.', 'I am in process of becoming an employee for your company', "I moved and I'm not sure if Grameen operates in the area of my new address (please contact your Grameen representative or branch manager for alternative options)", 'My representative changed, and I preferred my old representative', "Take to long to report to your credit report. If u paying weekly it should be every 30 days to report to ur credit . So ur credit can go up. I finish my loan and it don't show fully paid yet. And should show it", "I have a permanent job and if there is a change to face-to-face meetings I don't know if I could go"]

Total number of sentences in cluster: 27

Cluster 3: Unspecified Personal Reasons

['maybe in the future', 'L', 'I do not know yet', 'Personal organization', 'Personal', "I'll come in later", 'Later', "I can't for now I'm going to wait a while", "I can't for the moment", 'At the moment not until next year', "Don't need it right now", 'Personal']

Total number of sentences in cluster: 12

Cluster 4: Administrative Issues

['I felt that Grameen was making too many changes', 'I felt there were too many rules', 'For many reasons', 'Other reasons', 'I payed more increments', 'I felt that there were too many rules', 'Too much drama']

Total number of sentences in cluster: 7

Cluster 5: Poor Representative Treatment

['I did not like the behavior or treatment of my representative', 'I was unable to attend the meetings of the Center', 'Some people in my Center were not making their payments', 'There was a misunderstanding with my Group or Center', 'They do not respect our leader they did not connect to us, sometimes in the meetings there was no respect.', 'THE CONFERENCE SCHEDULE DID NOT HELP ME AT MY WORK AND I HAD NO SIGNAL.', 'For health reasons', "Because the past representative was very rude to the whole group, she intimidated us

and did not treat us with respect, that's why I left because she is very rude, her name is cony", 'In the group there is a lot of indifference amongst the companions, they get offended and there is no unity I am not used to so much disorder and they get offended with each other there has to be more organization and respect towards others', 'For bad behavior of one of my representatives and for unjustification', "Sometimes I can't attend meetings because I work.", 'Family problems', "It's just that I'm not working right now", 'I did not like the behavior or treatment by my representative', 'they suck dick', 'I was unable to attend the Center Meetings', "I don't want to go to someone house anymore I'm too scared of to many people on small space", 'There was a misunderstanding with my Group or Center', 'My rep only spoke in Spanish and never bothered translating what she said in the meeting. So I never knew what was going on unless I asked another member, which became a hassle.', 'Some people in my Center were not making their payments']

Total number of sentences in cluster: 20

Sentiment Analysis Results

Shown below are the results from performing Sentiment Analysis on the same set of 100 sentences. A total of 73 sentences were labeled "NEGATIVE" while the remaining 27 sentences were labeled "POSITIVE", which indicates that a vast majority of the comments were quite critical of Grameen. In regards to the score, most of the scores were in the high nineties with the exception of a few comments. For instance, the sentence "I am seeing how to do it because I work and the schedule I have does not allow me to be there" is labeled 'POSITIVE' and has an associated score of approximately 0.631, which means that this sentiment analysis model is only 63.1% sure that the particular sentence is "POSITIVE." In general, most of the comments had a score in the nineties, and taking the average of all the scores shows that the average score for this set of comments is approximately 0.969, which assures that the predictions that this model made for this set are generally quite accurate.

Given more time, we would have probably looked into improving this model by implementing a sentiment score for each sentence. This sentiment score would give a numerical rating for each sentence based on the level of emotion that is expressed in the sentence. For instance, we could have a scoring system from 1 to 5. Sentences that are very negative in nature (like "they suck dick") would be assigned a score of 1, sentences somewhat negative would be assigned a score of 2, sentences that are neutral would be assigned a score of 3, sentences that are somewhat positive would be assigned a score of 4, and sentences that are very positive would be assigned a score of 5. Doing so would result in clarifying our analysis by providing Grameen with data that helps them get a better idea of the quality of emotion for each sentence.

I did not like the behavior or treatment by my representative
{'label': 'NEGATIVE', 'score': 0.9970633387565613}

they suck dick
{'label': 'NEGATIVE', 'score': 0.9453746676445007}

I am still interested in participating in Grameen, but I would need a different day or time to attend the meetings, and I don't know how to do this (please contact your Grameen representative or branch manager for alternative options)
{'label': 'NEGATIVE', 'score': 0.9987980127334595}

I was unable to attend the Center Meetings
{'label': 'NEGATIVE', 'score': 0.9996576309204102}

I needed a break relocated and just need some time to revamp my business.
{'label': 'NEGATIVE', 'score': 0.999323844909668}

I don't want to go to someone house anymore I'm too scared of to many people on small space
{'label': 'NEGATIVE', 'score': 0.996404767036438}

My business is seasonal and depends on the weather, so I don't need another loan right now
{'label': 'NEGATIVE', 'score': 0.940306544303894}

I wanted more money, but was unable to increase my loan amount
{'label': 'NEGATIVE', 'score': 0.9994377493858337}

I am in process of becoming an employee for your company
{'label': 'POSITIVE', 'score': 0.9817094206809998}

4 of 40 members of my grupo didn't want to sign my loan
{'label': 'NEGATIVE', 'score': 0.9919262528419495}

There was a misunderstanding with my Group or Center
{'label': 'NEGATIVE', 'score': 0.9991075396537781}

I felt that there were too many rules
{'label': 'NEGATIVE', 'score': 0.9997487664222717}

I was unable to make my weekly payments
{'label': 'NEGATIVE', 'score': 0.9997598528862}

My rep only spoke in Spanish and never bothered translating what she said in the meeting. So I never knew what was going on unless I asked another member, which became a hassle.
{'label': 'NEGATIVE', 'score': 0.9960242509841919}

I moved and I'm not sure if Grameen operates in the area of my new address (please contact your Grameen representative or branch manager for alternative options)
{'label': 'NEGATIVE', 'score': 0.9982372522354126}

The loan amounts are too small and there is no option to pay off loan earlier than planned.
{'label': 'NEGATIVE', 'score': 0.9995890259742737}

My representative told me that the Executive people did not want me to get the loan anymore
{'label': 'NEGATIVE', 'score': 0.9987712502479553}

Too much drama
{'label': 'NEGATIVE', 'score': 0.999612033367157}

My representative changed, and I preferred my old representative
{'label': 'POSITIVE', 'score': 0.865554928779602}

Some people in my Center were not making their payments
{'label': 'NEGATIVE', 'score': 0.9992191791534424}

Take to long to report to your credit report. If u paying weekly it should be every 30 days to report to ur credit . So ur credit can go up. I finish my loan and it don't show fully paid yet. And should show it
{'label': 'NEGATIVE', 'score': 0.997868537902832}

I have a permanent job and if there is a change to face-to-face meetings I don't know if I could go
{'label': 'NEGATIVE', 'score': 0.996006429195404}

Don't need it right now
{'label': 'POSITIVE', 'score': 0.8948707580566406}

Personal
{'label': 'POSITIVE', 'score': 0.999430239200592}

I felt that Grameen was making too many changes
{'label': 'NEGATIVE', 'score': 0.9997847676277161}

My business is seasonal and depends on the weather, so I don't need another loan right now
{'label': 'NEGATIVE', 'score': 0.940306544303894}

For my health
{'label': 'POSITIVE', 'score': 0.9817624092102051}

At this moment I am not in need of money but possibly in the future I will occupy it. Very grateful for the good treatment you gave me while I was with you
{'label': 'POSITIVE', 'score': 0.999581515789032}

I did not like the behavior or treatment of my representative
{'label': 'NEGATIVE', 'score': 0.9963732361793518}

I was unable to attend the meetings of the Center
{'label': 'NEGATIVE', 'score': 0.9997314810752869}

Some people in my Center were not making their payments
{'label': 'NEGATIVE', 'score': 0.9992191791534424}

I had to wait too long for a loan
{'label': 'NEGATIVE', 'score': 0.9992300271987915}

There was a misunderstanding with my Group or Center
{'label': 'NEGATIVE', 'score': 0.9991075396537781}

There was COVID but I made my payments late, the members of my group paid my debt but this is the moment I continue to pay them my loan
{'label': 'POSITIVE', 'score': 0.9798271656036377}

No ?? I have work
{'label': 'NEGATIVE', 'score': 0.9824367761611938}

I will have surgery on my knee soon
{'label': 'NEGATIVE', 'score': 0.9825091361999512}

I have moved and am not sure if Grameen operates in the area of my new address (contact your Grameen representative or branch manager for alternative options)
{'label': 'NEGATIVE', 'score': 0.9991980195045471}

Whenever I had a question, what it was was never there for me and when half of the covid I asked him to please measure the chance of missing my payment or paying less for 3 weeks

because he had to stop working and he said no and he never answered me separately, he is an arrogant man without education, that's why I don't think I'll take the loan anymore
{'label': 'NEGATIVE', 'score': 0.9975121021270752}

My Center did not want to sign for my loan
{'label': 'NEGATIVE', 'score': 0.9965757727622986}

I felt there were too many rules
{'label': 'NEGATIVE', 'score': 0.9996362924575806}

I started working and unfortunately I can't attend the meetings
{'label': 'NEGATIVE', 'score': 0.9984753727912903}

I couldn't make my weekly payments
{'label': 'NEGATIVE', 'score': 0.999620795249939}

I moved to Baltimore and I don't know if there are centers here
{'label': 'NEGATIVE', 'score': 0.9877170920372009}

I could not make my payment, I lost my cell phone and my bank card and they told me that I had to wait for them to approve me.
{'label': 'NEGATIVE', 'score': 0.9997531771659851}

I am seeing how to do it because I work and the schedule I have does not allow me to be there
{'label': 'POSITIVE', 'score': 0.6313626170158386}

I wanted more money, but according to Grameen's rules, my application was not approved
{'label': 'NEGATIVE', 'score': 0.9997151494026184}

It doesn't seem fair to me that I should pay a debt that someone else hasn't done, plus they ruined my credit for reporting me twice with the same loan... apart from the fact that in the pandemic I made my payments on time and even so they would report me as late payments... I prefer to make loans with banks
{'label': 'NEGATIVE', 'score': 0.9996179342269897}

I am still interested in participating in Grameen, but I would need a different day or time to attend the meetings, and I don't know how to do it (contact your Grameen representative or the manager of branch for alternate options)
{'label': 'NEGATIVE', 'score': 0.9990866184234619}

I'll take a break for health
{'label': 'NEGATIVE', 'score': 0.9322342276573181}

My representative changed, and preferred my old representative
{'label': 'POSITIVE', 'score': 0.9487897753715515}

It is too Modesto, the state every week in the meetings is extreme, dame team, the requirements of demonstrations of what is being negotiated, I think that Pierre spends a lot of time, what Haden felt incapable as if fires in a child, taken by the hand in Ottawa, words is nut enslaved Thank you for the loan of 1,500
{'label': 'NEGATIVE', 'score': 0.9908604621887207}

For many reasons
{'label': 'NEGATIVE', 'score': 0.6267201900482178}

Other reasons
{'label': 'NEGATIVE', 'score': 0.9479080438613892}

maybe a future
{'label': 'POSITIVE', 'score': 0.99208003282547}

The possibility that the meetings will be witnessed
{'label': 'POSITIVE', 'score': 0.993786096572876}

I'm out of the country right now
{'label': 'POSITIVE', 'score': 0.997215747833252}

I'm on my way to work and they won't let us use the phone
{'label': 'POSITIVE', 'score': 0.9805263876914978}

I was able to get the money elsewhere
{'label': 'NEGATIVE', 'score': 0.9991974234580994}

They do not respect our leader they did not connect sometimes to the meetings there was no respect
{'label': 'NEGATIVE', 'score': 0.9996345043182373}

THE CONFERENCE SCHEDULE DID NOT HELP ME AT MY WORK AND I HAD NO SIGNAL.
{'label': 'NEGATIVE', 'score': 0.9995158910751343}

They operate on me and I don't have a job for now until my eyes recover
{'label': 'NEGATIVE', 'score': 0.9477887153625488}

L
{'label': 'POSITIVE', 'score': 0.9401154518127441}

If I plan to renew it, I'm just waiting to finish the process for my own house and Grameen was affecting my credit report, but if I plan to renew it at the right time
{'label': 'NEGATIVE', 'score': 0.999036431312561}

My financed situation is stable for now and I don't need my loan
{'label': 'POSITIVE', 'score': 0.995644211769104}

I can not renew because it measures another state thanks
{'label': 'NEGATIVE', 'score': 0.9893821477890015}

For health reasons
{'label': 'NEGATIVE', 'score': 0.9779900312423706}

Because no representative is very rude to the whole group, she intimidates us and does not treat us with respect, that's why I left because she is very rude, her name is cony
{'label': 'NEGATIVE', 'score': 0.9990742206573486}

In the group there is a lot of indifference among the companions they get offended and there is no unity I am not used to so much disorder and they get offended with each other there has to be more organization and respect towards others
{'label': 'NEGATIVE', 'score': 0.9955388903617859}

The hours don't work for me
{'label': 'NEGATIVE', 'score': 0.9984458088874817}

For bad behavior of one of my representatives and for unjustification
{'label': 'NEGATIVE', 'score': 0.9979827404022217}

I do not know yet
{'label': 'NEGATIVE', 'score': 0.9889146685600281}

I no longer want to because I feel that they are very abusive with the treatment of us by the representatives of greemen since they use the too many rules to intimidate you for the loans so I decided not to carry more with that stress that they were giving me causing.
{'label': 'NEGATIVE', 'score': 0.99891197681427}

Sometimes I can't attend meetings because I work.
{'label': 'NEGATIVE', 'score': 0.9753962755203247}

Grameen is not worth taking another loan. They damaged my credit several times since the first loan I took. I won't recommend it to anyone. And the loans are for low amounts.
{'label': 'NEGATIVE', 'score': 0.9996852874755859}

It doesn't seem to me that we have to waste so much time in one day just to say how much we pay, if the reason is to undertake and help, we should send a photo of the payments and now, I don't understand why they make us attend a meeting for an hour or more just to say story we pay.
{'label': 'NEGATIVE', 'score': 0.9907808899879456}

Personal organization
{'label': 'POSITIVE', 'score': 0.9996155500411987}

Personal
{'label': 'POSITIVE', 'score': 0.999430239200592}

Family problems
{'label': 'NEGATIVE', 'score': 0.9885563254356384}

Grameen has already helped me a lot and I have already grown with the money they lent me, thank you very much because now I can get ahead without any loan??
{'label': 'POSITIVE', 'score': 0.9990824460983276}

I'll come in later
{'label': 'POSITIVE', 'score': 0.996379554271698}

I am working out of state
{'label': 'POSITIVE', 'score': 0.5437614321708679}

I have several loans and I have not been bad and it is not helping me to make credit and the reasons they give me do not satisfy me.
{'label': 'NEGATIVE', 'score': 0.9994774460792542}

I'm waiting for my Grameen card
{'label': 'NEGATIVE', 'score': 0.9964398741722107}

Later
{'label': 'POSITIVE', 'score': 0.9647393226623535}

I closed the place but if I can pick it up I will look for you and thanks?? for helping me
{'label': 'POSITIVE', 'score': 0.9859957098960876}

I have no way to pay my business went bankrupt
{'label': 'NEGATIVE', 'score': 0.999768078327179}

I can't for now I'm going to wait a while
{'label': 'NEGATIVE', 'score': 0.9983469247817993}

They stole 396 dollars from me and I'm still waiting for them to solve it but it's very bad service and I don't recommend it to anyone
{'label': 'NEGATIVE', 'score': 0.9985775947570801}

They stole 400 dollars from me
{'label': 'NEGATIVE', 'score': 0.9917082190513611}

It is not very pleasant that people decide whether to give you the loan or not, when I explained why I will not attend the meetings, then I asked permission to return and they accepted, after they decided not to, the center should To take action on the matter since I never defaulted on my payments, my investments were higher than the loan and they let the women decide, when I think there is a lot of selfishness in some of them, and they think they have the Total right. They should remove that rule since the Centrochip or I don't know how to say the representatives of Granme are capable of making that decision.
{'label': 'NEGATIVE', 'score': 0.9989956021308899}

I can't for the moment
{'label': 'NEGATIVE', 'score': 0.9227743744850159}

I don't like the way they handle the payments
{'label': 'NEGATIVE', 'score': 0.9967220425605774}

I started working and I can't use my cell phone much
{'label': 'NEGATIVE', 'score': 0.9989799857139587}

I like zoom meetings but I'm not used to sitting for 40 minutes and I feel that my time being at home and attending meetings can be more productive for me if I just spend my time sitting listening to the instructions of the representative with This is not to say that they are not important, but my time is too.
{'label': 'NEGATIVE', 'score': 0.9275881052017212}

I changed jobs that generate more income
{'label': 'POSITIVE', 'score': 0.9214434027671814}

I don't understand if we are adults, why should we be reminding each of the members to make their payments if when they want the loan they don't have to be reminded and members also come back who were bad before and then the boss will be drawing attention to the representatives since he gives them another opportunity for that reason I did not want to be in the group anymore I'm sorry if I'm a bit direct but if they look bad once I don't think they reflect and now I am calm without pressure thank you very much for all grameen America for the opportunity you gave me
{'label': 'POSITIVE', 'score': 0.9292119741439819}

I played more igrementos
{'label': 'POSITIVE', 'score': 0.9408605098724365}

At the moment not until next year
{'label': 'POSITIVE', 'score': 0.5376573204994202}

It's just that I'm not working right now
{'label': 'NEGATIVE', 'score': 0.999685525894165}

I invest the Loans I have had in my business and for now I have a good stocked inventory.
{'label': 'POSITIVE', 'score': 0.998377799987793}

Total POSITIVE count = 27
Total NEGATIVE count = 73
Average score = 0.9689927488565445

Keyword Extraction Results

The keyword extraction results from using the RAKE algorithm for the same set of data is shown below. Some of the common and significant words from these results include: 'treatment', 'representative', 'meetings', 'respect', 'loan', 'business', 'center', 'group', 'payments', 'job', 'personal', 'seasonal', 'health', 'rules', 'time', 'renew', 'moved', 'sign', 'money', 'behavior'. Along with the words/phrases are an associated word score for each one. An individual word score is calculated as the degree (number of times it appears + number of additional words it appears with) of a word divided by its frequency (number of times it appears). In general, a greater word score would indicate that the particular word or phrase is more significant in the context of the sentence.

Sentence: I did not like the behavior or treatment by my representative
Keywords: [('behavior', 1.0), ('treatment', 1.0), ('representative', 1.0)]

Sentence: they suck dick
Keywords: [('suck dick', 4.0)]

Sentence: I am still interested in participating in Grameen, but I would need a different day or time to attend the meetings, and I don't know how to do this (please contact your Grameen representative or branch manager for alternative options)
Keywords: [('branch manager', 4.0), ('alternative options', 4.0), ('grameen representative', 3.5), ('grameen', 1.5), ('interested', 1.0), ('participating', 1.0), ('day', 1.0), ('time', 1.0), ('attend', 1.0), ('meetings', 1.0), ('contact', 1.0)]

Sentence: I was unable to attend the Center Meetings
Keywords: [('center meetings', 4.0), ('unable', 1.0), ('attend', 1.0)]

Sentence: I needed a break relocated and just need some time to revamp my business.
Keywords: [('break relocated', 4.0), ('needed', 1.0), ('time', 1.0), ('revamp', 1.0), ('business', 1.0)]

Sentence: I don't want to go to someone house anymore I'm too scared of to many people on small space
Keywords: [('house anymore', 4.0), ('small space', 4.0), ('scared', 1.0), ('people', 1.0)]

Sentence: My business is seasonal and depends on the weather, so I don't need another loan right now
Keywords: [('business', 1.0), ('seasonal', 1.0), ('depends', 1.0), ('weather', 1.0), ('loan', 1.0)]

Sentence: I wanted more money, but was unable to increase my loan amount
Keywords: [('loan amount', 4.0), ('wanted', 1.0), ('money', 1.0), ('unable', 1.0), ('increase', 1.0)]

Sentence: I am in process of becoming an employee for your company
Keywords: [('process', 1.0), ('employee', 1.0), ('company', 1.0)]

Sentence: 4 of 40 members of my grupo didn't want to sign my loan
Keywords: [('40 members', 1.0), ('grupo', 1.0), ('sign', 1.0), ('loan', 1.0)]

Sentence: There was a misunderstanding with my Group or Center
Keywords: [('misunderstanding', 1.0), ('group', 1.0), ('center', 1.0)]

Sentence: I felt that there were too many rules
Keywords: [('felt', 1.0), ('rules', 1.0)]

Sentence: I was unable to make my weekly payments
Keywords: [('weekly payments', 4.0), ('unable', 1.0), ('make', 1.0)]

Sentence: My rep only spoke in Spanish and never bothered translating what she said in the meeting. So I never knew what was going on unless I asked another member, which became a hassle.
Keywords: [('bothered translating', 4.0), ('rep', 1.0), ('spoke', 1.0), ('spanish', 1.0), ('meeting', 1.0), ('knew', 1.0), ('asked', 1.0), ('member', 1.0), ('hassle', 1.0)]

Sentence: I moved and I'm not sure if Grameen operates in the area of my new address (please contact your Grameen representative or branch manager for alternative options)
Keywords: [('grameen operates', 4.0), ('grameen representative', 4.0), ('branch manager', 4.0), ('alternative options', 4.0), ('moved', 1.0), ('area', 1.0), ('address', 1.0), ('contact', 1.0)]

Sentence: The loan amounts are too small and there is no option to pay off loan earlier than planned.
Keywords: [('loan amounts', 4.0), ('loan earlier', 4.0), ('small', 1.0), ('option', 1.0), ('pay', 1.0), ('planned', 1.0)]

Sentence: My representative told me that the Executive people did not want me to get the loan anymore
Keywords: [('representative told', 4.0), ('executive people', 4.0), ('loan anymore', 4.0)]

Sentence: Too much drama
Keywords: []

Sentence: My representative changed, and I preferred my old representative
Keywords: [('representative changed', 3.5), ('representative', 1.5), ('preferred', 1.0)]

Sentence: Some people in my Center were not making their payments
Keywords: [('people', 1.0), ('center', 1.0), ('making', 1.0), ('payments', 1.0)]

Sentence: Take to long to report to your credit report. If u paying weekly it should be every 30 days to report to ur credit . So ur credit can go up. I finish my loan and it don't show fully paid yet. And should show it
Keywords: [('show fully paid', 8.0), ('paying weekly', 4.0), ('ur credit', 4.0), ('credit report', 3.333333333333333), ('show', 2.0), ('report', 1.3333333333333333), ('long', 1.0), ('30 days', 1.0), ('finish', 1.0), ('loan', 1.0)]

Sentence: I have a permanent job and if there is a change to face-to-face meetings I don't know if I could go
Keywords: [('permanent job', 4.0), ('face-to-face meetings', 4.0), ('change', 1.0)]

Sentence: Don't need it right now
Keywords: []

Sentence: Personal
Keywords: [('personal', 1.0)]

Sentence: I felt that Grameen was making too many changes
Keywords: [('felt', 1.0), ('grameen', 1.0), ('making', 1.0)]

Sentence: My business is seasonal and depends on the weather, so I don't need another loan right now
Keywords: [('business', 1.0), ('seasonal', 1.0), ('depends', 1.0), ('weather', 1.0), ('loan', 1.0)]

Sentence: For my health
Keywords: [('health', 1.0)]

Sentence: At this moment I am not in need of money but possibly in the future I will occupy it. Very grateful for the good treatment you gave me while I was with you
Keywords: [('good treatment', 4.0), ('moment', 1.0), ('money', 1.0), ('possibly', 1.0), ('future', 1.0), ('occupy', 1.0), ('grateful', 1.0), ('gave', 1.0)]

Sentence: I did not like the behavior or treatment of my representative
Keywords: [('behavior', 1.0), ('treatment', 1.0), ('representative', 1.0)]

Sentence: I was unable to attend the meetings of the Center
Keywords: [('unable', 1.0), ('attend', 1.0), ('meetings', 1.0), ('center', 1.0)]

Sentence: Some people in my Center were not making their payments
Keywords: [('people', 1.0), ('center', 1.0), ('making', 1.0), ('payments', 1.0)]

Sentence: I had to wait too long for a loan
Keywords: [('wait', 1.0), ('long', 1.0), ('loan', 1.0)]

Sentence: There was a misunderstanding with my Group or Center
Keywords: [('misunderstanding', 1.0), ('group', 1.0), ('center', 1.0)]

Sentence: There was COVID but I made my payments late, the members of my group paid my debt but this is the moment I continue to pay them my loan
Keywords: [('payments late', 4.0), ('group paid', 4.0), ('covid', 1.0), ('made', 1.0), ('members', 1.0), ('debt', 1.0), ('moment', 1.0), ('continue', 1.0), ('pay', 1.0), ('loan', 1.0)]

Sentence: No ?? I have work
Keywords: [('work', 1.0)]

Sentence: I will have surgery on my knee soon
Keywords: [('surgery', 1.0), ('knee', 1.0)]

Sentence: I have moved and am not sure if Grameen operates in the area of my new address (contact your Grameen representative or branch manager for alternative options)
Keywords: [('grameen operates', 4.0), ('grameen representative', 4.0), ('branch manager', 4.0), ('alternative options', 4.0), ('moved', 1.0), ('area', 1.0), ('address', 1.0), ('contact', 1.0)]

Sentence: Whenever I had a question, what it was was never there for me and when half of the covid I asked him to please measure the chance of missing my payment or paying less for 3

weeks because he had to stop working and he said no and he never answered me separately, he is an arrogant man without education, that's why I don't think I'll take the loan anymore
Keywords: [('stop working', 4.0), ('arrogant man', 4.0), ('loan anymore', 4.0), ('question', 1.0), ('half', 1.0), ('covid', 1.0), ('asked', 1.0), ('measure', 1.0), ('chance', 1.0), ('missing', 1.0), ('payment', 1.0), ('paying', 1.0), ('3 weeks', 1.0), ('answered', 1.0), ('separately', 1.0), ('education', 1.0)]

Sentence: My Center did not want to sign for my loan
Keywords: [('center', 1.0), ('sign', 1.0), ('loan', 1.0)]

Sentence: I felt there were too many rules
Keywords: [('felt', 1.0), ('rules', 1.0)]

Sentence: I started working and unfortunately I can't attend the meetings
Keywords: [('started working', 4.0), ('attend', 1.0), ('meetings', 1.0)]

Sentence: I couldn't make my weekly payments
Keywords: [('weekly payments', 4.0), ('make', 1.0)]

Sentence: I moved to Baltimore and I don't know if there are centers here
Keywords: [('moved', 1.0), ('baltimore', 1.0), ('centers', 1.0)]

Sentence: I could not make my payment, I lost my cell phone and my bank card and they told me that I had to wait for them to approve me.
Keywords: [('cell phone', 4.0), ('bank card', 4.0), ('make', 1.0), ('payment', 1.0), ('lost', 1.0), ('told', 1.0), ('wait', 1.0), ('approve', 1.0)]

Sentence: I am seeing how to do it because I work and the schedule I have does not allow me to be there
Keywords: [('work', 1.0), ('schedule', 1.0)]

Sentence: I wanted more money, but according to Grameen's rules, my application was not approved
Keywords: [("grameen's rules", 4.0), ('wanted', 1.0), ('money', 1.0), ('application', 1.0), ('approved', 1.0)]

Sentence: It doesn't seem fair to me that I should pay a debt that someone else hasn't done, plus they ruined my credit for reporting me twice with the same loan... apart from the fact that in the pandemic I made my payments on time and even so they would report me as late payments... I prefer to make loans with banks

Keywords: [('make loans', 4.0), ('late payments', 3.5), ('payments', 1.5), ('fair', 1.0), ('pay', 1.0), ('debt', 1.0), ('ruined', 1.0), ('credit', 1.0), ('reporting', 1.0), ('loan', 1.0), ('fact', 1.0), ('pandemic', 1.0), ('made', 1.0), ('time', 1.0), ('report', 1.0), ('prefer', 1.0), ('banks', 1.0)]

Sentence: I am still interested in participating in Grameen, but I would need a different day or time to attend the meetings, and I don't know how to do it (contact your Grameen representative or the manager of branch for alternate options)
Keywords: [('alternate options', 4.0), ('grameen representative', 3.5), ('grameen', 1.5), ('interested', 1.0), ('participating', 1.0), ('day', 1.0), ('time', 1.0), ('attend', 1.0), ('meetings', 1.0), ('contact', 1.0), ('manager', 1.0), ('branch', 1.0)]

Sentence: I'll take a break for health
Keywords: [('break', 1.0), ('health', 1.0)]

Sentence: My representative changed, and preferred my old representative
Keywords: [('representative changed', 3.5), ('representative', 1.5), ('preferred', 1.0)]

Sentence: It is too Modesto, the state every week in the meetings is extreme, dame team, the requirements of demonstrations of what is being negotiated, I think that Pierre spends a lot of time, what Haden felt incapable as if fires in a child, taken by the hand in Ottawa, words is nut enslaved Thank you for the loan of 1,500
Keywords: [('haden felt incapable', 9.0), ('dame team', 4.0), ('pierre spends', 4.0), ('nut enslaved', 4.0), ('modesto', 1.0), ('state', 1.0), ('week', 1.0), ('meetings', 1.0), ('extreme', 1.0), ('requirements', 1.0), ('demonstrations', 1.0), ('negotiated', 1.0), ('lot', 1.0), ('time', 1.0), ('fires', 1.0), ('child', 1.0), ('hand', 1.0), ('ottawa', 1.0), ('words', 1.0), ('loan', 1.0), ('500', 0)]

Sentence: For many reasons
Keywords: [('reasons', 1.0)]

Sentence: Other reasons
Keywords: [('reasons', 1.0)]

Sentence: maybe a future
Keywords: [('future', 1.0)]

Sentence: The possibility that the meetings will be witnessed
Keywords: [('possibility', 1.0), ('meetings', 1.0), ('witnessed', 1.0)]

Sentence: I'm out of the country right now
Keywords: [('country', 1.0)]

Sentence: I'm on my way to work and they won't let us use the phone
Keywords: [('work', 1.0), ('phone', 1.0)]

Sentence: I was able to get the money elsewhere
Keywords: [('money', 1.0)]

Sentence: They do not respect our leader they did not connect sometimes to the meetings there was no respect
Keywords: [('respect', 1.0), ('leader', 1.0), ('connect', 1.0), ('meetings', 1.0)]

Sentence: THE CONFERENCE SCHEDULE DID NOT HELP ME AT MY WORK AND I HAD NO SIGNAL.
Keywords: [('conference schedule', 4.0), ('work', 1.0), ('signal', 1.0)]

Sentence: They operate on me and I don't have a job for now until my eyes recover
Keywords: [('eyes recover', 4.0), ('operate', 1.0), ('job', 1.0)]

Sentence: L
Keywords: []

Sentence: If I plan to renew it, I'm just waiting to finish the process for my own house and Grameen was affecting my credit report, but if I plan to renew it at the right time
Keywords: [('credit report', 4.0), ('plan', 1.0), ('renew', 1.0), ('waiting', 1.0), ('finish', 1.0), ('process', 1.0), ('house', 1.0), ('grameen', 1.0), ('affecting', 1.0), ('time', 1.0)]

Sentence: My financed situation is stable for now and I don't need my loan
Keywords: [('financed situation', 4.0), ('stable', 1.0), ('loan', 1.0)]

Sentence: I can not renew because it measures another state thanks
Keywords: [('renew', 1.0), ('measures', 1.0), ('state', 1.0)]

Sentence: For health reasons
Keywords: [('health reasons', 4.0)]

Sentence: Because no representative is very rude to the whole group, she intimidates us and does not treat us with respect, that's why I left because she is very rude, her name is cony
Keywords: [('representative', 1.0), ('rude', 1.0), ('group', 1.0), ('intimidates', 1.0), ('treat', 1.0), ('respect', 1.0), ('left', 1.0), ('cony', 1.0)]

Sentence: In the group there is a lot of indifference among the companions they get offended and there is no unity I am not used to so much disorder and they get offended with each other there has to be more organization and respect towards others

Keywords: [('group', 1.0), ('lot', 1.0), ('indifference', 1.0), ('companions', 1.0), ('offended', 1.0), ('unity', 1.0), ('disorder', 1.0), ('organization', 1.0), ('respect', 1.0)]

Sentence: The hours don't work for me
Keywords: [('hours', 1.0), ('work', 1.0)]

Sentence: For bad behavior of one of my representatives and for unjustification
Keywords: [('bad behavior', 4.0), ('representatives', 1.0), ('unjustification', 1.0)]

Sentence: I do not know yet
Keywords: []

Sentence: I no longer want to because I feel that they are very abusive with the treatment of us by the representatives of greemen since they use the too many rules to intimidate you for the loans so I decided not to carry more with that stress that they were giving me causing.
Keywords: [('longer', 1.0), ('feel', 1.0), ('abusive', 1.0), ('treatment', 1.0), ('representatives', 1.0), ('greemen', 1.0), ('rules', 1.0), ('intimidate', 1.0), ('loans', 1.0), ('decided', 1.0), ('carry', 1.0), ('stress', 1.0), ('giving', 1.0), ('causing', 1.0)]

Sentence: Sometimes I can't attend meetings because I work.
Keywords: [('attend meetings', 4.0), ('work', 1.0)]

Sentence: Grameen is not worth taking another loan. They damaged my credit several times since the first loan I took. I won't recommend it to anyone. And the loans are for low amounts.
Keywords: [('worth taking', 4.0), ('low amounts', 4.0), ('grameen', 1.0), ('loan', 1.0), ('damaged', 1.0), ('credit', 1.0), ('times', 1.0), ('recommend', 1.0), ('loans', 1.0)]

Sentence: It doesn't seem to me that we have to waste so much time in one day just to say how much we pay, if the reason is to undertake and help, we should send a photo of the payments and now, I don't understand why they make us attend a meeting for an hour or more just to say story we pay.
Keywords: [('waste', 1.0), ('time', 1.0), ('day', 1.0), ('pay', 1.0), ('reason', 1.0), ('undertake', 1.0), ('send', 1.0), ('photo', 1.0), ('payments', 1.0), ('understand', 1.0), ('make', 1.0), ('attend', 1.0), ('meeting', 1.0), ('hour', 1.0), ('story', 1.0)]

Sentence: Personal organization
Keywords: [('personal organization', 4.0)]

Sentence: Personal
Keywords: [('personal', 1.0)]

Sentence: Family problems
Keywords: [('family problems', 4.0)]

Sentence: Grameen has already helped me a lot and I have already grown with the money they lent me, thank you very much because now I can get ahead without any loan??
Keywords: [('grameen', 1.0), ('helped', 1.0), ('lot', 1.0), ('grown', 1.0), ('money', 1.0), ('lent', 1.0), ('ahead', 1.0), ('loan', 1.0)]

Sentence: I'll come in later
Keywords: []

Sentence: I am working out of state
Keywords: [('working', 1.0), ('state', 1.0)]

Sentence: I have several loans and I have not been bad and it is not helping me to make credit and the reasons they give me do not satisfy me.
Keywords: [('make credit', 4.0), ('loans', 1.0), ('bad', 1.0), ('helping', 1.0), ('reasons', 1.0), ('give', 1.0), ('satisfy', 1.0)]

Sentence: I'm waiting for my Grameen card
Keywords: [('grameen card', 4.0), ('waiting', 1.0)]

Sentence: Later
Keywords: [('later', 1.0)]

Sentence: I closed the place but if I can pick it up I will look for you and thanks?? for helping me
Keywords: [('closed', 1.0), ('place', 1.0), ('pick', 1.0), ('helping', 1.0)]

Sentence: I have no way to pay my business went bankrupt
Keywords: [('pay', 1.0), ('business', 1.0), ('bankrupt', 1.0)]

Sentence: I can't for now I'm going to wait a while
Keywords: [('wait', 1.0)]

Sentence: They stole 396 dollars from me and I'm still waiting for them to solve it but it's very bad service and I don't recommend it to anyone
Keywords: [('stole 396 dollars', 4.0), ('bad service', 4.0), ('waiting', 1.0), ('solve', 1.0), ('recommend', 1.0)]

Sentence: They stole 400 dollars from me
Keywords: [('stole 400 dollars', 4.0)]

Sentence: It is not very pleasant that people decide whether to give you the loan or not, when I explained why I will not attend the meetings, then I asked permission to return and they accepted, after they decided not to, the center should To take action on the matter since I never defaulted on my payments, my investments were higher than the loan and they let the women decide, when I think there is a lot of selfishness in some of them, and they think they have the Total right. They should remove that rule since the Centrochip or I don't know how to say the representatives of Granme are capable of making that decision.
Keywords: [('people decide', 4.0), ('asked permission', 4.0), ('women decide', 4.0), ('pleasant', 1.0), ('give', 1.0), ('loan', 1.0), ('explained', 1.0), ('attend', 1.0), ('meetings', 1.0), ('return', 1.0), ('accepted', 1.0), ('decided', 1.0), ('center', 1.0), ('action', 1.0), ('matter', 1.0), ('defaulted', 1.0), ('payments', 1.0), ('investments', 1.0), ('higher', 1.0), ('lot', 1.0), ('selfishness', 1.0), ('total', 1.0), ('remove', 1.0), ('rule', 1.0), ('centrochip', 1.0), ('representatives', 1.0), ('granme', 1.0), ('capable', 1.0), ('making', 1.0), ('decision', 1.0)]

Sentence: I can't for the moment
Keywords: [('moment', 1.0)]

Sentence: I don't like the way they handle the payments
Keywords: [('handle', 1.0), ('payments', 1.0)]

Sentence: I started working and I can't use my cell phone much
Keywords: [('started working', 4.0), ('cell phone', 4.0)]

Sentence: I like zoom meetings but I'm not used to sitting for 40 minutes and I feel that my time being at home and attending meetings can be more productive for me if I just spend my time sitting listening to the instructions of the representative with This is not to say that they are not important, but my time is too.
Keywords: [('time sitting listening', 6.666666666666667), ('zoom meetings', 4.0), ('attending meetings', 4.0), ('sitting', 2.0), ('time', 1.6666666666666667), ('40 minutes', 1.0), ('feel', 1.0), ('home', 1.0), ('productive', 1.0), ('spend', 1.0), ('instructions', 1.0), ('representative', 1.0), ('important', 1.0)]

Sentence: I changed jobs that generate more income
Keywords: [('changed jobs', 4.0), ('generate', 1.0), ('income', 1.0)]

Sentence: I don't understand if we are adults, why should we be reminding each of the members to make their payments if when they want the loan they don't have to be reminded and members also come back who were bad before and then the boss will be drawing attention to the representatives since he gives them another opportunity for that reason I did not want to be in the group anymore I'm sorry if I'm a bit direct but if they look bad once I don't think they reflect and

now I am calm without pressure thank you very much for all grameen America for the opportunity you gave me
Keywords: [('drawing attention', 4.0), ('group anymore', 4.0), ('bit direct', 4.0), ('grameen america', 4.0), ('understand', 1.0), ('adults', 1.0), ('reminding', 1.0), ('members', 1.0), ('make', 1.0), ('payments', 1.0), ('loan', 1.0), ('reminded', 1.0), ('back', 1.0), ('bad', 1.0), ('boss', 1.0), ('representatives', 1.0), ('opportunity', 1.0), ('reason', 1.0), ('reflect', 1.0), ('calm', 1.0), ('pressure', 1.0), ('gave', 1.0)]

Sentence: I played more igrementos
Keywords: [('played', 1.0), ('igrementos', 1.0)]

Sentence: At the moment not until next year
Keywords: [('moment', 1.0), ('year', 1.0)]

Sentence: It's just that I'm not working right now
Keywords: [('working', 1.0)]

Sentence: I invest the Loans I have had in my business and for now I have a good stocked inventory.
Keywords: [('good stocked inventory', 9.0), ('invest', 1.0), ('loans', 1.0), ('business', 1.0)]

CITATIONS

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GITHUB LINK: https://github.com/dhong515/ECE-476-Data-Science-for-Social-Good