## T-Visa Team 1 Project Deliverable 2

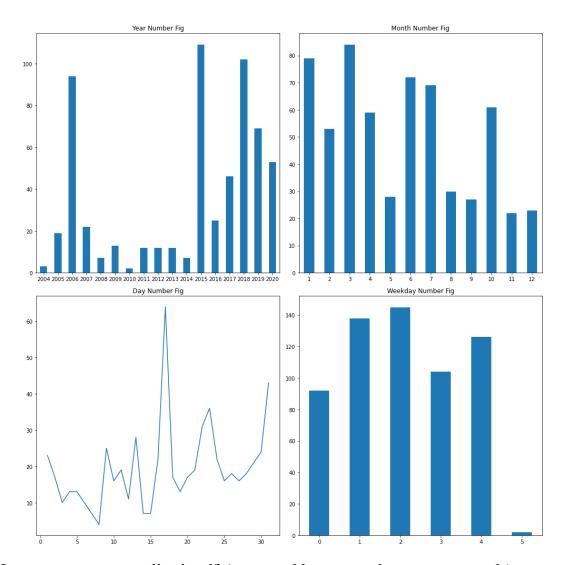
Kehan Wang, Xiaoxin Gan, Yansong Bai

In this report, we exclude all derivative applications (applications for family members), and only target on these "Appeal" cases.

#### 1. How many cases were decided?

There are a total of 188 cases that were decided from the old dataset given by our client. Considering the new dataset, we found that there are a total of 502 cases. Overall, the decided "Appeal" case has 86.67% of total cases. Our figure below has all the cases from 2004 to 2020; according to it, the year of 2015 has the most applications, and the year of 2010 has the fewest applications. We also observed that the middle of each month has the most applicants, and Friday is not a good day to submit an application.

Figure 1: Trend for All "Appeal" Cases



### 2. How many cases were dismissed? (separated by year to demonstrate trends)

There are a total of 544 dismissed cases for the old dataset. According to the figure below, we can see that there are basically two peaks from 2004-2020. The first peak was in 2006. The cases dismissed in 2004-2006 and 2007-2014 are quite low. Besides that, we also noticed that the dismissed cases in 2015 and 2018 are quite high. In the rest of years, the number of dismissed cases are in the average level. We conducted some work related to topic modeling. According to Figure 3, you can see the top 7 topics that are most likely to be mentioned in "dismissed" cases.

Figure 2: Trend for Case "Dismissed"

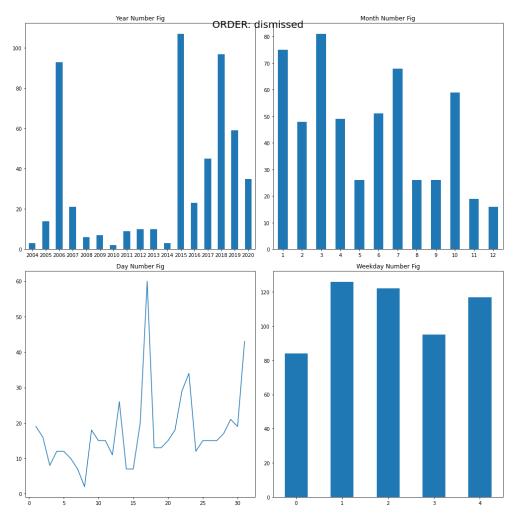


Figure 3: Top Topic for Case "Dismissed"

Topic #0:
applicant application trafficking nonimmigrant form act appeal director victim 15 sections vermont center service status

Topic #1:
applicant states united falcon pursuant act agreed employ order remain entered native citizen status immigration

Topic #2:
trafficking act 15 applicant nonimmigrant classification victim severe seeks nationality 101 immigration persons form 1101

Topic #3:
redacted applicant states united mr visas family act people money citizen student married work january

Topic #4:
china native citizen immigration enter 2004 attempted judge september respondent motion 2005 smuggled continuance decision

Topic #5:
trafficking severe act section form applicant crime persons investigation alien united states request account victim

Topic #6:

aao waiver inadmissibility act issue united states section director rfe address traffickers immigrant october issued

3. How many cases were granted (this can be indicated by language including: grant, sustain, or withdraw and remanded back to the agency)?

There are merely a total of 53 cases. The number of granted cases are in the low region compared to dismissed cases. The trend for the granted cases are quite low from 2005-2018. Then, there is a big jump in the year 2019. We can see that the number of granted cases increases very quickly and strongly. The peak for the granted cases are in the year 2020. We also conducted some work related to topic modeling in this part, according to Figure 5, we can top 7 topics that are most likely to be mentioned in "granted" cases.

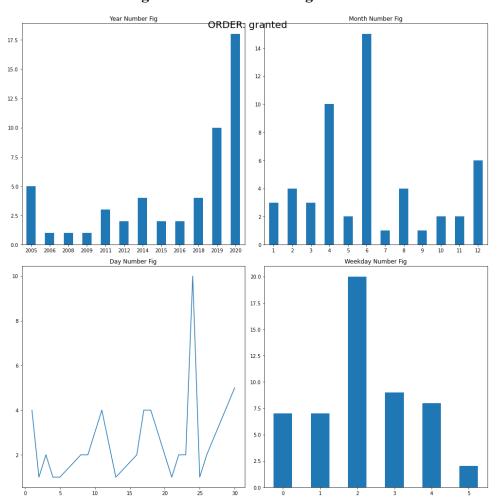


Figure 4: Trend for case "granted"

Figure 5: Top Topic for case "granted"

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Topic #0:
applicant application nonimmigrant trafficking form act appeal director victim 15 sections status 914 denied center

Topic #1:
position philippines states pay united order large debt 2003 act section stated remain placed immigration

Topic #2:
china 2004 attempted enter smuggled taken native august citizen custody fraudulent using passport country united

Topic #3:
trafficking applicant severe persons form victim act 15 states united director account present establish nonimmigrant

Topic #4:
act 15 applicant victim classification section form nonimmigrant severe nationality immigration 101 seeks trafficking persons

Topic #5:
nonimmigrant act classification trafficking 15 status seeks 101 immigration applicant acts nationality affords 1101 victims

Topic #6:
applicant states united falcon pursuant act agreed employ order citizen status native entered remain immigration
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#### 4. What grounds were cases denied? (separated by year to demonstrate trends)

Since we only make analysis on "Appeal" cases, we only found 1 case got denied, that is denied on December 13rd 2017; and the core terms including: traffic, physical presence, severe form, redact, nonimmigrant, abroad, port of entry, sex act, classification, interim, sex, reasonable request, judicial process, time of filing, servitude, reenter, kill.

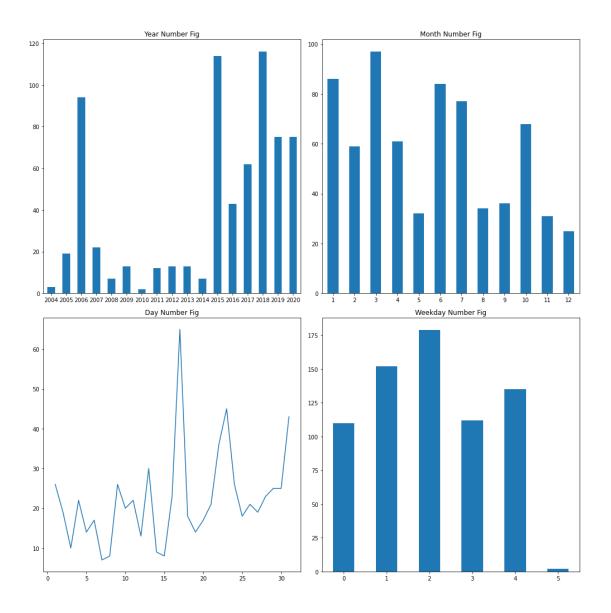
#### 5. How has this changed over time?

The trend for the decided cases and dismissals we can see their trend looks quite similar, the both went up, went down, then went up again. For the granted cases, we can see that the number of cases stay quite low for a long time and jump up erratically in recent years. The overall decided cases and granted cases all less than the number of dismissed cases

#### 6. Any patterns? (All cases, including appeal and motion)

Later, we plot a figure to find the trend of all applications from 2004 to 2020. Since motion cases are only a small portion of total cases, we didn't find any specific patterns that were different from Figure 1. However, according to Figure 2 and Figure 3, we can assume that June is a good month to submit an application, the applications submitted on 25th of each month are most likely to be granted, and Tuesday is also a good day to start an application. Besides, during preprocessing, we found derivative applications (applications for family members) are actually most likely to be rejected/denied. Hence, derivative applications are not recommended.

Figure 6: Trend for all cases, including appeal and motion



# Appendix:

## a. What does each column represent?

We made two datasets based on the given data sources, namely AAO Non-Precedent Decisions and LEXIS. We contacted them during the analysis stage.

'Url':	AAO Non-Precedent Decisions	LEXIS
'File_name'	This column is for the file name	

'ID'	This column is for the case number, a unique identifier to			
	distinguish each case	distinguish each case		
'date',	This column is for the date of	This column is for the date of the application		
'type'	This column is used to distingu	This column is used to distinguish appeal case or motion case.		
'status'	Only apply to AAO Non-Precedent Decision, used to check if the applicant is the family member of victims.	Set to "Unknown" or "NaN"		
'order'	The column is used to describe dismissed or granted.	The column is used to describe the result of application, e.g dismissed or granted.		
'is_family'	Only apply to AAO Non-Precedent Decision, a boolean value to determine whether the applicant is a family member	Set to "Unknown" or "NaN"		
'description'	This Column declares the desc	This Column declares the description of the application.		
'core_terms'	Set to "Unknown" or "NaN"	Only apply to LEXIS cases, this column declares the description of the application.		
'citation'	Set to "Unknown" or "NaN"	Only apply to LEXIS cases, this column is for the head of application record in LEXIS system. The four/five digit number can be used to distinguish each application.		
'S-M-P'	Set to "Unknown" or "NaN"	Only apply to LEXIS cases, this column describes whether the application contains "Matter of S-M-P"		
'aao citation'	Set to "Unknown" or "NaN"	Only apply to LEXIS cases, this column describes the aao citation of each case.		
'consel'	Set to "Unknown" or "NaN"	Only apply to LEXIS cases,		

		this column is to illustrate the representation of the applicant.
'description'	This column contains the description of the application.	