

Pairing Mentors and Mentees using Data Analysis


By Zach Liu
For Industrial Engineering Mentorship Program

Data Cleaning

```
#importing neccessary libraries
import pandas as pd
import numpy as np
import matplotlib.pyplot as plt
import seaborn as sns

# read in the tables
mentee = pd.read_csv('mentees.csv')
mentor = pd.read_csv('mentors.csv')
```

mentee.head()



	Timestamp	Username	Full Name	Phone Number	What program are you in?	Please list all your hobbies using commas to separate them (e.g. running, chess, etc...)	Minors/certificates are you interested in pursuing?	Which type of projects are you interested in?
0	2024/07/22 3:58:58 p.m. AST	can.bircan@mail.utoronto.ca	Can Kerem Bircan	+90 542 604 51 05	Industrial Engineering	Traveling, Gym, Boulder, Karting, Running, phi...	Sustainable Engineering;Engineering Business;P...	Business/Oper...
1	2024/07/23 3:46:55 a.m. AST	liankett@outlook.com	Anke Li	+86 186 1610 6307	Industrial Engineering	Synchronized swimming, Kpop, drawing	Biomedical Engineering;Bioengineer	Co
2	2024/07/23 9:32:00 a.m. AST	jeanne.huang@mail.utoronto.ca	Jeanne Huang	437-662-8166	Industrial Engineering	Debating, painting/drawing, and skiing	NaN	Product/Proje
3	2024/07/23 9:36:54 a.m. AST	jeannehuang1020@gmail.com	Jeanne Huang	437-662-8166	Industrial Engineering	Debating, painting, and skiing	NaN	Product/Proje
4	2024/07/23 12:13:25	kaylia0587@gmail.com	Kaylia	7787707813	Industrial	learning languages,	Biomedical	

mentor.head()



	Timestamp	Username	Full Name	Phone Number	Year	Why do you want to be a mentor?	Please list all your hobbies using commas to separate them (e.g. running, chess, etc...)	Which minors/certificates are you currently pursuing?	Which types of experience in
0	2024/07/22 1:16:27 p.m. AST	jonah.ernest@mail.utoronto.ca	Jonah Ernest	4169964088	4th	Wanting to share my experience in the Indy com...	board games, running, avid foodie/coffee lover...	Engineering Business	
1	2024/07/22 1:19:42 p.m. AST	lea.kwon@mail.utoronto.ca	Lea Kwon	6478604753	3rd	Through the mentorship program, I received a l...	martial arts, bjj, reading, swimming, hiking	Engineering Business	Business/Operations;I
2	2024/07/22 1:25:31 p.m. AST	jaskamal.patti@mail.utoronto.ca	Jaskamal Patti	4162742656	3rd	I would love to be an Indy mentor again this y...	Swimming, nail art, yoga, walking, travelling	NaN	Consulting;Business/Opera
3	2024/07/22 1:38:45 p.m. AST	ivanmusuba7@gmail.com	Ivan Musuba	6475634912	2nd	I understand the importance of mentorship and ...	Reading, site seeing, karaoke	Engineering Business	Consulting;Business/Opera
4	2024/07/22 1:40:08 p.m. AST	jess.kang@mail.utoronto.ca	Jessica Kang	6476145521	PEY	I didn't know what I wanted to do coming into ...	music, drawing, video games, crocheting	Engineering Business	Consulting;Business/Oper:

```
#looking at these data, need to clean the data by getting rid of the irrelevant columns

mentee.columns = mentee.columns.str.strip() # Removes leading/trailing spaces
menteeCol = ['Timestamp', 'What program are you in?', 'Can we add you to a WhatsApp group with the other mentors and mentees?', 'Can we shar

mentor.columns = mentor.columns.str.strip()
mentorCol = ['Timestamp', 'Year', 'Why do you want to be a mentor?', 'Can we add you to a WhatsApp group with the other mentors and mentees?

mentee = mentee.drop(menteeCol, axis=1)
mentor = mentor.drop(mentorCol, axis=1)
mentee.head()
```



	Username	Full Name	Phone Number	Please list all your hobbies using commas to separate them (e.g. running, chess, etc...)	Minors/certificates are you interested in pursuing?	Which types of careers are you considering?	org: i abou SI
0	can.bircan@mail.utoronto.ca	Can Kerem Bircan	+90 542 604 51 05	Traveling, Gym, Boulder, Karting, Running, phi...	Sustainable Engineering;Engineering Business;P...	Business/Operations;Product/Project Management...	e
1	liankett@outlook.com	Anke	+86 186	Synchronized swimming	Biomedical Engineering;Bioprocess	Consulting;Still Deciding	SI

```
mentor.head()
```



	Username	Full Name	Phone Number	Please list all your hobbies using commas to separate them (e.g. running, chess, etc...)	Which minors/certificates are you currently pursuing?	Which types of careers do you have experience in or are considering?	organiz part (e.g clubs, sports
0	jonah.ernest@mail.utoronto.ca	Jonah Ernest	4169964088	board games, running, avid foodie/coffee	Engineering Business	Data Science	Indy C V

```
# We know that there are null numbers, however, they don't affect too much.
mentee.isnull().sum()
```



0

Username	0
Full Name	0
Phone Number	0
Please list all your hobbies using commas to separate them (e.g. running, chess, etc...)	1
Minors/certificates are you interested in pursuing?	2
Which types of careers are you considering?	0
What organizations/clubs are you thinking about participating in? (e.g. List Skule clubs, UofT clubs, sports teams, etc.)	0
Anything you would like us to know when matching you with a mentor?	25
What communication apps do you prefer?	0
Ethnicity (select all that apply)	0
What languages do you speak?	1
What is your gender?	1
Do you only want to be matched with someone of the same gender? (i.e. if you identify as a woman, your mentor would be another woman)	1

dtype: int64

mentor.isnull().sum()



0

Username	0
Full Name	0
Phone Number	0
Please list all your hobbies using commas to separate them (e.g. running, chess, etc...)	0
Which minors/certificates are you currently pursuing?	18
Which types of careers do you have experience in or are considering?	0
What organizations/clubs have you participated in? (e.g. List Skule clubs, UofT clubs, sports teams, etc.)	2
Is there anything you want us to know when matching you with a mentee? i.e. preferences, life or school experiences, concerns, etc.	21
What communication apps do you prefer?	0
Ethnicity (select all that apply)	0
What languages do you speak?	0
What is your gender?	1
Do you only want to be matched with someone of the same gender? (i.e. if you identify as a woman, you would mentor another woman)	2

dtype: int64

The column names are too complicated

len(mentor.columns)

len(mentee.columns)

```
mentee.columns = ['Mentee Email', 'Mentee Name', 'Phone Number', 'Mentee Hobbies', 'Minors and Certificates',
                  'Mentee Career Interests', 'Mentee Clubs', 'Mentee Preference', 'Mentee Communication Method',
                  'Mentee Ethnicity', 'Mentee Language', 'Mentee Gender', 'Mentee Gender Preference']
```

```
mentor.columns = ['Mentor Email', 'Mentor Name', 'Phone Number', 'Mentor Hobbies', 'Minors and Certificates',
                  'Mentor Career Interests', 'Mentor Clubs', 'Mentor Preference', 'Mentor Communication Method',
                  'Mentor Ethnicity', 'Mentor Language', 'Mentor Gender', 'Mentor Gender Preference']
```

Check for duplicate names

print(mentor.duplicated(subset=['Mentor Name']).sum())

print(mentee.duplicated(subset=['Mentee Name']).sum())

Drop duplicates

mentor = mentor.drop_duplicates(subset=['Mentor Name'])

mentee = mentee.drop_duplicates(subset=['Mentee Name'])

↻ 0
3

mentee.head()

↻

	Mentee Email	Mentee Name	Phone Number	Mentee Hobbies	Minors and Certificates	Mentee Career Interests	
0	can.bircan@mail.utoronto.ca	Can Kerem Bircan	+90 542 604 51 05	Traveling, Gym, Boulder, Karting, Running, phi...	Sustainable Engineering;Engineering Business;P...	Business/Operations;Product/Project Management...	e
1	liankett@outlook.com	Anke Li	+86 186 1610 6307	Synchronized swimming, Kpop, drawing	Biomedical Engineering;Bioengineer	Consulting;Still Deciding	syr
2	jeanne.huang@mail.utoronto.ca	Jeanne	437-662-	Debating, painting/drawing	NaN	Product/Project Management;Data	clu

mentor.head()

↻

	Mentor Email	Mentor Name	Phone Number	Mentor Hobbies	Minors and Certificates	Mentor Career Interests	Mentor Clubs	Pr
0	jonah.ernest@mail.utoronto.ca	Jonah Ernest	4169964088	board games, running, avid foodie/coffee lover...	Engineering Business	Data Science	Indy Club, Engineers Without Borders (EWB), YN...	expl extra
1	lea.kwon@mail.utoronto.ca	Lea Kwon	6478604753	martial arts, bjj, reading, swimming, hiking	Engineering Business	Business/Operations;Finance;Product/Project Ma...	NaN	UTCA, IoT

Analysis

I am going to be using a weighted system to pair mentors and mentees. Different features will be weighted differently based on how important it is. One challenge is that some people have indicated specific preferences when they filled out the form, so we would want to prioritize the most. Their responses are, however, not organized. So I am thinking to use NLP tools to proceed the analysis with that. *Update, I also normalized other columns just to make my analysis easier.

```
# Importing necessary libraries
import nltk
import string
from nltk.corpus import stopwords
from nltk.tokenize import word_tokenize
from nltk.stem import WordNetLemmatizer

# Downloading NLTK resources
nltk.download('punkt')
nltk.download('stopwords')
nltk.download('wordnet')

# Define the text processing function
def process_text(text):
    tokens = word_tokenize(text)
    stop_words = set(stopwords.words('english'))
    tokens = {word.lower() for word in tokens if word.isalnum() and word not in stop_words}
    lemmatizer = WordNetLemmatizer()
    tokens = {lemmatizer.lemmatize(word) for word in tokens}
    return tokens

# List of important columns containing texts to fill NA values and apply text processing
```

```
# List of important columns containing texts to fill NA values and apply text processing
```

```
mentor_columns = [  
    'Mentor Preference', 'Mentor Hobbies', 'Minors and Certificates',  
    'Mentor Career Interests', 'Mentor Clubs', 'Mentor Ethnicity',  
    'Mentor Language', 'Mentor Gender'  
]
```

```
mentee_columns = [  
    'Mentee Preference', 'Mentee Hobbies', 'Minors and Certificates',  
    'Mentee Career Interests', 'Mentee Clubs', 'Mentee Ethnicity',  
    'Mentee Language', 'Mentee Gender'  
]
```

```
# Fill NA values and process text for mentor columns  
for col in mentor_columns:  
    mentor[col].fillna('', inplace=True)  
    mentor[col] = mentor[col].astype(str).apply(process_text)
```

```
# Fill NA values and process text for mentee columns  
for col in mentee_columns:  
    mentee[col].fillna('', inplace=True)  
    mentee[col] = mentee[col].astype(str).apply(process_text)
```

```
# Inspect the processed columns  
mentor
```

```

[nltk_data] Downloading package punkt to /root/nltk_data...
[nltk_data] Unzipping tokenizers/punkt.zip.
[nltk_data] Downloading package stopwords to /root/nltk_data...
[nltk_data] Unzipping corpora/stopwords.zip.
[nltk_data] Downloading package wordnet to /root/nltk_data...

```

	Mentor Email	Mentor Name	Phone Number	Mentor Hobbies	Minors and Certificates	Mentor Career Interests	Mentor Clubs	Mentor Preferences
0	jonah.ernest@mail.utoronto.ca	Jonah Ernest	4169964088	{travelling, board, running, game, lover, avid}	{engineering, business}	{data, science}	{without, engineer, indy, club, ewb, yncn, bor...}	{st, navi, explo, involer}
1	lea.kwon@mail.utoronto.ca	Lea Kwon	6478604753	{bjj, swimming, reading, art, martial, hiking}	{engineering, business}	{management, finance, deciding, data, chain, s...}	{}	
2	jaskamal.patti@mail.utoronto.ca	Jaskamal Patti	4162742656	{travelling, yoga, nail, swimming, art, walking}	{}	{management, finance, consulting, deciding, da...}	{patrol, utat, utca, ssa, uoft, week, skule, f...}	{i, ar, mal}
3	ivanmusuba7@gmail.com	Ivan Musuba	6475634912	{karaoke, seeing, reading, site}	{engineering, business}	{finance, consulting, chain, entrepreneurship,...}	{non}	{b, s, cor}
4	jess.kang@mail.utoronto.ca	Jessica Kang	6476145521	{video, drawing, game, music, crocheting}	{engineering, business}	{grad, master, human, consulting, school, fact...}	{utoph}	
5	mazen.ismail@mail.utoronto.ca	Mazen Ismail	4165205408	{sport, game, movie, video}	{engineering, business}	{finance, consulting, data, chain, supply, sof...}	{intramural, engineering, team, basketball}	{mu, com}
6	anjali.jammulamadaka@mail.utoronto.ca	Anjali Jammulamadaka	5406804307	{card, reading, pilate, hiking}	{}	{finance, data, chain, supply, science}	{indy, utfr, club}	
7	em.he@mail.utoronto.ca	Emma He	6477872322	{leadership, video, chess, badminton, game, co...}	{engineering, business}	{finance, consulting, data, software, science,...}	{ewb, utesca, utsm}	{st, som, c, opportu}
8	linqiao.zhang@mail.utoronto.ca	LinQiao Zhang	6478245819	{watching, badminton, drama, music, show, call...}	{engineering, business}	{still, deciding, entrepreneurship, software, ...}	{utcv, utyun, indy, utasr, utace, club, week,...}	{fit, migh, suit, ma}
9	ellie.jung@mail.utoronto.ca	Yejin Ellie Jung	647024661	{miniature, playing, work, watching, book, mak...}	{}	{finance, grad, master, consulting, school, ph...}	{student, subcom, university, engineering, kor...}	{habit, school, exper}
10	haley.oxholm@mail.utoronto.ca	Haley Oxholm	6475058715	{craft, painting, drawing, gym, singing, socce...}	{}	{software, consulting}	{ball, soccer, volley, jazz, skule, choir, osc...}	
11	fahd.fares@mail.utoronto.ca	Fahd Fares	4168439996	{gaming, coding, gym}	{}	{data, software, science}	{rosh, week, f}	
12	sehyun.lee@mail.utoronto.ca	Joe	4376609391	{drinking, photography, music, youtube, coffee}	{}	{finance, policy, grad, master, deciding, scho...}	{ewb}	
13	jiacheng.kan@mail.utoronto.ca	Jiacheng Kan	416-835-0458	{badminton, gaming, basketball}	{engineering, business}	{grad, master, school, data, science, phd, man...}	{utek}	
14	alber.vurdaul@mail.utoronto.ca	alber vurdaul	6475128017	{going, reading}	{engineering, business}	{finance, ...}	{badminton, soccer}	

				{music, genre, nature, reading, walking, explo...	{business}	{consulting}	{tennis, club}	
15	izhaan.junaid@mail.utoronto.ca	Izhaan Junaid	6475711738	{going, shop, gym, baking, class, barre, coffe...	{engineering, business}	{consulting, management}	{manager, 2023, since, directorship, webmaster...	{st unde entire through
16	solar.rezaei@mail.utoronto.ca	Solar Rezaei	6472370240	{cad, fifa, chess, game, basketball, soccer, p...	{engineering, business}	{management}	{without, microsoft, volunteer, translator, st...	{hel an' absc
17	ahmedz.khan@mail.utoronto.ca	Ahmed	6474252976	{football, soccer, jujitsu, brazilian}	{engineering, business}	{still, finance, consulting, deciding, softwar...	{firmware, deep, uoft, one, formula, learning}	{pdsb, d
18	ghaleb.alqusur@mail.utoronto.ca	Ghaleb Alqusur	2897958858	{travelling, board, game, gym, fitness}	{engineering, business}	{artificial, intelligence, chain, entrepreneur...	{no, uoft, club}	
19	ralph.maalouf@mail.utoronto.ca	Ralph Maalouf	6478638287	{playing, volleyball, reading, walking, cookin...	{engineering, business}	{grad, master, school, data, chain, entreprene...	{racing, university, utca, consulting, utf, f...	{ai includ also, p
20	yagmur.germiyanoglu@mail.utoronto.ca	Ayşe Yagmur Germiyanoglu	437 808 42 49	{board, writing, game, shopping, etc, reading,...	{engineering, business}	{finance, grad, master, consulting, school, te...	{student, university, presentation, day, fair,...	{st interna hel think
21	joshuamint.liu@mail.utoronto.ca	Joshua Liu	778-798-2711	{playing, piano, running, pilate, formula1, re...	{engineering, business}	{consulting, chain, entrepreneurship, supply, ...	{border, without, engineer}	{wel eve
22	selin.akin@mail.utoronto.ca	Selin Akin	4375999708	{running, gym, padel, basketball}	{}	{consulting}	{}	
23	alex.harb@mail.utoronto.ca	Alex Harb	8193296802	{graphic, basketball, swimming, reading, desig...	{engineering, business}	{consulting, data, software, science, management}	{intramurals, utefa, seismic, indy, rosh, skul...	{st comm le su ha
24	hayden.groer@mail.utoronto.ca	Hayden Groer	6472483724	{hockey, watch, chess, lego, soccer, poker, sk...	{}	{management, ai, question, policy, forgot, you...	{sport, human, group, indy, factor, club, socc...	
25	a.mainella@mail.utoronto.ca	Adam Mainella	(416) 427-2931	{pickleball, craft, rock, climbing, podcasting...	{engineering, business}	{management, consulting, entrepreneurship}	{yncn, utca}	{l son year, i, first, er
26	sihan.xiong@mail.utoronto.ca	Catherine Xlong	7783192498	{rock, climbing, watching, running, music, gym...	{engineering, business}	{finance, consulting, data, chain, entrepreneu...	{intramurals, indyclub, yncn}	{fu som
27	gracexyd.huang@mail.utoronto.ca	Grace Huang	9786023083					

mentee



	Mentee Email	Mentee Name	Phone Number	Mentee Hobbies	Minors and Certificates	Mentee Career Interests	Mentee Clubs	Mentee Preferences
0	can.bircan@mail.utoronto.ca	Can Kerem Bircan	+90 542 604 51 05	{boulder, running, gym, philosophy, traveling,...}	{sustainable, preventative, development, engin...}	{supply, management, chain, entrepreneurship}	{athletics, chess, running, engineering, ewb, ...}	
1	liankett@outlook.com	Anke Li	+86 186 1610 6307	{swimming, drawing, synchronized, kpop}	{biomedical, engineering, bioengineer}	{still, consulting, deciding}	{sport, synchronized, swimming, maybe, team}	{local, head, schedu, concerne, cours, kee
2	jeanne.huang@mail.utoronto.ca	Jeanne Huang	437-662-8166	{debating, skiing}	{}	{management, policy, grad, master, school, dec...}	{club, art, related, team, debate, design}	
4	kaylia9587@gmail.com	Kaylia Chan	7787797813	{crocheting, strolling, shopping, window, lear...}	{biomedical, sustainable, engineering, environ...}	{still, deciding}	{cube, igem, uoftcafe, wise, orchestra}	
5	angelinewong125@gmail.com	Angeline Wong	647-639-8851	{piano, swimming, game, video}	{engineering, robotics, entrepreneurship, busi...}	{still, deciding}	{im, sure, yet, want, i, club, see, week, frosh}	{someor, dor, friend}
6	khadra.ian@gmail.com	Ian Khadra	778-873-7738	{video, sport, astronomy, game, basketball, so...}	{robotics, mechatronics, entrepreneurship}	{finance, consulting, data, software, science,...}	{yet, lot, aware, many, not, team, intramural}	
7	astridcanada04@gmail.com	Astrid Auldrey Arboleda Astudillo	7164300399	{dancing, cooking, video, make}	{engineering, global}	{still, deciding}	{skule, uoft, club}	
8	mikebotnari.jr@gmail.com	Michael Botnari	6472448270	{watching, 1, soccer, golfing, biking, formula...}	{sustainable, engineering, entrepreneurship, b...}	{still, deciding}	{soccer, utfr, league}	
9	saif.sharif2006@gmail.com	Saif Ali	+966566553329	{going, gym, soccer, swimming, restaurant, mov...}	{engineering, entrepreneurship, business}	{management, finance, grad, master, consulting...}	{soccer, team}	
10	c.kameda@mail.utoronto.ca	Chika Kameda	7787914470	{eating, gym, pottery, hiking}	{sustainable, preventative, development, engin...}	{management}	{utoc}	{like, matc, would, g
11	caitlin.halim@mail.utoronto.ca	Caitlin Christie Halim	+6281586518123	{movie, watch}	{engineering, business}	{still, deciding}	{undecided}	
12	tristenchen15@gmail.com	Tristen Wang, Chen	+886 979 375 113 (no Canadian phone number yet)	{general, anything, robotics, interesting, rea...}	{engineering, robotics, entrepreneurship, busi...}	{deciding, management, entrepreneurship, still}	{like, some, sport, engineering, club, project...}	{ment, fir, hopefu, shy, meetir
13	kimi.an@mail.utoronto.ca	Kimi An	6477626773	{reading, rugby}	{engineering, entrepreneurship, business}	{finance, grad, master, consulting, school, da...}	{part, possible, considering, would, hatchery,...}	{like, simil, me, someor, sha, would,
14	malek.chamas@mail.utoronto.ca	Malek Chamas	+961 70 717 800	{playing, city, history, sport, running, volle...}	{sustainable, engineering, environmental, glob...}	{management, grad, master, consulting, school,...}	{student, sport, community, lebanese, track, t...}	
15	michel.issa@mail.utoronto.ca	Michel Zakhia Issa	+961 79 312 315	{chess, 1, running, programming, aviation.	{sustainable, engineering, entrepreneurship,	{grad, master, consulting, school, chain. entr...}	{solar, sae, blue, racing, aerospace,	

				soc...	b...		tinance,...	
16	lucas.aguiar@mail.utoronto.ca	Lucas Furtado Aguiar	+5511973552005	{game, music, swimming, reading, guitar}	{engineering, business}	{finance, grad, master, consulting, school, da...	{engineering, music, club, autoronto, society}	{interest min artifici intelligenc
17	juneetalv03@gmail.com	Juneeta Vangala	2364122637	{rock, climbing, reading, biking, guitar, hiking}	{robotics, mechatronics}	{data, software, science}	{robotics, rock, climbing}	
18	zhuoivan@gmail.com	Ivan Zhuo	4168227578	{editing, video, photography, game, music, gui...	{engineering, business}	{management, grad, master, consulting, school,...	{racing, f1, engineering, boat, dragon, band, ...}	{r preferenc
19	arojasvme@gmail.com	Alexa Rojas	+525522605156	{travelling, watching, sport, running, pilate,...	{engineering, robotics, global, business, mech...	{software, management}	{engineering, aiesec, missionary, humanity, en...	
20	kayleeee0516@gmail.com	Kaylee Shin	82 10-9739-5901	{badminton, sudoku}	{development, engineering, social, preventative}	{product, system, development, deciding, desig...	{sport, skule, team, club}	
21	amariais195wssy@gmail.com	Jingwen Yang	6475226812	{swim, sing, running, dance, paint}	{robotics, biomedical, engineering, mechatronics}	{software, finance, management}	{student, union, university, club, dance, toro...	{englis speal patie nati high ferr
22	chrissy.zhou@mail.utoronto.ca	Chrissy Zhou	7783850024	{puzzle, jigsaw, playing, photography, riding,...	{biomedical, sustainable, engineering, environ...	{still, deciding}	{sure, yet, not}	
23	justinl03212006@gmail.com	Justin Lee	6476547584	{travelling, hockey, video, game, basketball, ...}	{engineering, robotics, global, entrepreneursh...	{deciding, management, software, still}	{racing, utra, university, seek, hide, sae, cl...	
24	adamabboud44@gmail.com	Adam Abboud	+971508285574	{board, chess, game, basketball, soccer}	{engineering, business}	{finance, grad, master, consulting, deciding}	{tennis, team}	{simil intere someo

Algorithm

```
# Now that we have converted and lemmatized the column, we can proceed to match them with categories to see which one needs to be emphasized
# To do this, we can use dictionary
categories = {
    'language': {'language', 'mandarin', 'chinese', 'english', 'speak'},
    'career': {'career', 'data', 'ai', 'artificial intelligence', 'software', 'trader', 'robotic'},
    'ethnicity': {'ethnicity', 'indonesian', 'muslim'}
}

# Now we have manually sorted out the key words and categories that we need to pay attention to, it's time to start the pairing algorithm
# To start, I realized that in general it's the best to match people with similar interests and hobbies, which can be done after we normalize
# However, there are certain constraints that I must follow, for example, if Gender Preference is yes, then need to find someone with the same
# Their written preferences will weigh more to be prioritized. And depending on what category it is, we need to search for different columns to
# Since there are less mentees than mentors and mentees are prioritized in this program, we need to pair mentee with mentor

# This takes in specific mentee and specific mentor, since we are gonna iterate through rows one by one
def calculate_score (mentee, mentor):
    score = 0

    # Checking if they prioritize a certain feature, in other words, do they have preference in one of the categories above
    if (len(set(mentee['Mentee Preference']).intersection(categories['language']))) > 0 or (len(set(mentee['Mentee Preference']).intersection(c

    # Now we need to check which category it belongs exactly and attribute more weight to the feature accordingly
    if len(set(mentee['Mentee Preference']).intersection(categories['language']))) > 0:
        score += len(set(mentee['Mentee Language']).intersection(mentor['Mentor Language'])) * 10
```