Future Trends Report
Based on Analysis of the Team's Chosen Community / Organisation in Mid-Term and Final Evaluation

Community / Organisation Studied: <u>Dating Application/ Paktor</u>

STEP 1. Identify Challenges

Read the Future Scene carefully and generate ideas for challenges, concerns, and possible related problems. Choose the 5 most important challenges and write them in the space provided. Include applicable research with appropriate in-text citations.

Challenge #1:

Observation:
Based on our interview of Ms June Lim, a representative of the Paktor Group, **Gender, Age, Profession, Height, Hobbies and Past swiping behaviour** were collected data to recommend or match profiles.

Problem:
While data collection can serve to greater personalise user experience, the gathered data can be prone to breaches and privacy infringement.

Research:
According to Dan Swinhoe (2020), breaches that affect hundreds of millions or even billions of people are far too common. About 3.5 billion people saw their personal data stolen in the top two of 15 biggest breaches of this century alone. In 2013, retail giant Target had more than 110 million of its customers' credit card and contact information compromised.

- More recently in 2018, it was revealed that Cambridge Analytica had harvested the personal data of millions of people's Facebook profiles without their consent and used it for political advertising purposes. They micro-targeted US voters with carefully tailored messages about Republican nominee across digital channels through intensive survey research, data modelling and performance-optimising algorithms were used to target 10,000 different ads to different audiences in the months leading to the election. Therefore, swaying the voters' opinion and decision in their favour.

A study conducted by the Norwegian Consumer Council (NCC, 2020), found that several popular dating apps, including Tinder, OkCupid and Grindr, share detailed personal data on their users with third parties for advertising purposes.

- Dating apps sometimes transfer specific GPS coordinates and unmasked IP addresses to advertisers. In addition, to biographical information such as gender and age, some of the apps passed tags indicating the user's sexual orientation and dating interests. OKCupid went even further, sharing information about drug use and political leanings.

Challenge #2:

Observation:
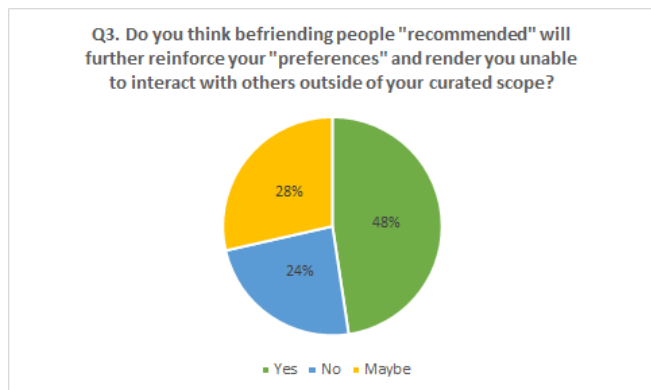
- Based on our survey, 48% think that befriending people "recommended" will further reinforce their "preferences"and making it more difficult for them to interact with others outside the curated scope.

Therefore, people are likely to mix with people of the same preference, opinions and beliefs

Problem:
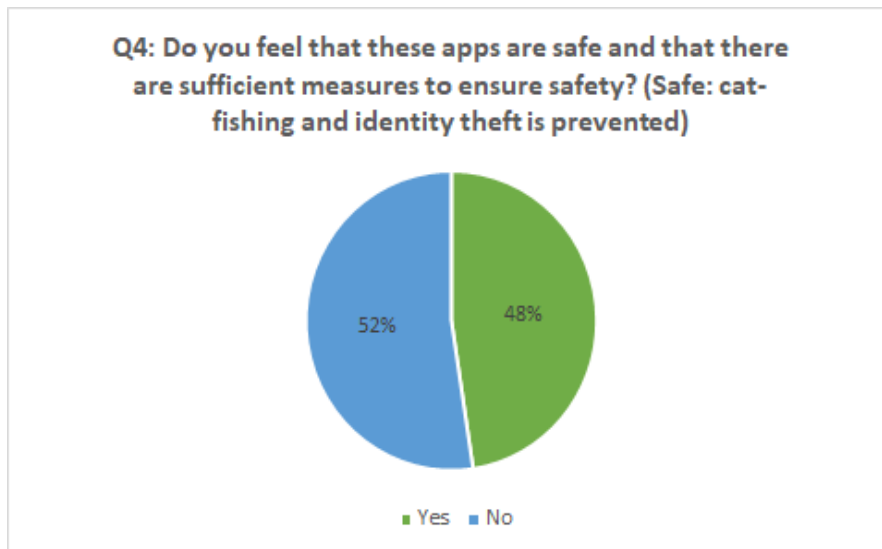Echo chambers of same belief may arise causing out point of view to be narrowed

Research:
Echo chambers may arise as a result, be it one's belief and preferences. For example according to an article by the New York Post, Chelsea Reynolds, an assistant professor of communications at California State University said "Just like other social media, dating sites can create **echo chambers of political ideology."** (Kari Paul and Marketwatch, 2017) As people are mixing with people of the same beliefs, which in the long run reinforce their own beliefs too. This could be prevalent in the online dating industry, especially religion or race, as what may originally be a preference may turn to a prejudice or bias against a particular race or religion.

Challenge #3

Observation:
Although Paktor ensure safety through a number of ways:
(1) Validate through their social media accounts
(2) Algorithms
(3) Manual review
(4) Allowing users to report suspicious accounts

Q4: Do you feel that these apps are safe and that there are sufficient measures to ensure safety? (Safe: cat-fishing and identity theft is prevented)

52%   48%

■ Yes ■ No

- Based on our survey, 52% of respondents feel that these apps are unsafe and that there are insufficient measures to ensure safety
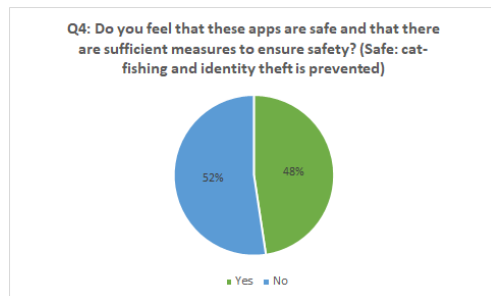
Problem:
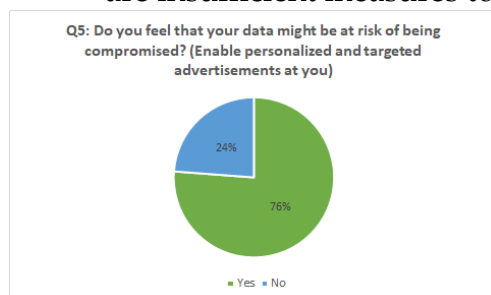This shows that there is a lack of trust in how the company manages data and digital security.

Research:
As BCG research (2015) has shown, consumer trust is the key to unlocking big data's full value potential; without such confidence, billions of euros in future economic and social value might be lost.

According to BCG (2016), the lack of alignment between companies and consumers about data privacy has real consequences. When consumers perceive data misuse—when they are unpleasantly surprised by the collection or new use of personal data—they either reduce their spending drastically or boycott a company's products and services altogether.

Challenge #4:

Observation:

Q4: Do you feel that these apps are safe and that there are sufficient measures to ensure safety? (Safe: cat-fishing and identity theft is prevented)

52%   48%

■ Yes ■ No

- Based on our survey, 52% of respondents feel that these apps are unsafe and that there are insufficient measures to ensure safety.

Q5: Do you feel that your data might be at risk of being compromised? (Enable personalized and targeted advertisements at you)

24%

76%

■ Yes ■ No

- Based on our survey, 76% of respondents feel that their data might be at risk of being compromised.
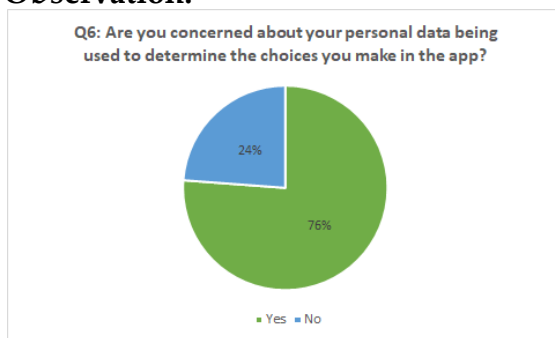
Problem:
People are worried that their identity may be stolen and hence may not be willing to use dating apps.

Research:
According to the Federal Trade Commission, online dating scams are the highest total reported scam — and that's what *reported*. In 2016 in the U.S., **$220 million dollars** were stolen by these criminals and in 2018, **$143 million dollars** were reported lost.

The vast number of cases of online dating scam through dating apps may be as a factor in why certain people may not want to use such apps. The number of cases is only counting those that are reported, i.e. the actual number is likely to far outstrip what is reported. The actual number of cases is much higher and more people have experienced hence it will become a larger deterrent.

Challenge #5:

Observation:

Q6: Are you concerned about your personal data being used to determine the choices you make in the app?

24%

76%

■ Yes ■ No

- Based on our survey, 76% of respondents are concerned about their personal data being used to determine the choices they make in the app

Problem:
The curated dating experience may entice users to make in app purchases to improve their chances of getting a match. This can lead to excessive and impulsive spending by users.

Research:
According to Analytics firm App Annie (2020), Singapore users have spent US$7.1 million (S$9.9 million) on dating apps in 2019, a good 80 per cent more than what was spent in 2017 (US$3.9 million).

The Tinder base app is free to use with limited features. However, it offers Tinder Plus, a subscription service that extends some features and gives you access to others. According to a Tinder representative, the app's data show that Super Likes are three times more likely to receive a match. Therefore, along with the curated selection of potential dating partners, it is not surprising that a majority of their revenue comes from Tinder Plus.

STEP 2. Craft the Underlying Problem

Using the challenges listed in Step 1, identify a problem of major importance to the chosen community / organization in the future. Write your Underlying Problem making sure your question clearly explains the action that will be taken and the desired results/goal of that action.

Incorporating Challenge(s) #   1, 3, 4

Underlying Problem:

Given that there are numerous dangers of dating apps, the Dating App industry is negatively affected through the loss of revenue as consumers become more wary and doubtful of using them. **(Condition Phrase)** How might we increase user trust in Dating Apps **(Key-Verb Phrase)** so that they can use it without much worry. **(Purpose)** in the years 2030 and beyond, in Singapore? **(FSP)**

STEP 3. Produce Solution Ideas

Generate solution ideas to the Underlying Problem in Step 2. Choose the 5 most effective solutions and write the elaborated ideas in the space provided. Include applicable research with appropriate in-text citations.

Solution #1: Mandatory Safety Course

We, the owners of Data-Paired, (who) shall in the span of 3 years, (when) work with the dating apps to implement a mandatory safety course where the users are required to enrol in before using the app. (what) So that users know how to ensure their own safety (how) and with this become more trusting of Dating Apps, (where) and put their minds at ease. (why)

Research

There are many cases of scams on dating apps. For example, Peter Aw Boo Cheong admitted to 14 counts of cheating involving nearly $250,000. He used *Tinder* to meet these women and thus was able to cheat their money.

Mary (2020) stated that users themselves therefore need to take sensible and relevant precautions to stay safe, especially when giving out details of other social networks, and especially when meeting people offline. As such, knowledge acquired from mandatory safety course on Do and Don't will enable one's to ensure their own safety when using dating apps.

Sherri (2020) also stated that while you are never to blame if someone behaves in a predatory or disrespectful way toward you in the online dating world, there are things you can do to stay safe. Therefore, knowledge acquired from mandatory safety course can increase one's ability to identify threat to ensure their own safety.

Solution #2: Virtual Reality Programme

We, the owners of data paired collaboration with the developers of Dating Apps, (Who) shall in the span of 5 years, (When) launch an interactive Virtual Reality Programme. (What) This programme will allow users to view how their data is used through Artificial Intelligence (AI) algorithm and machine learning to do a better match. In addition, they will be able to see the various data encryption software in place to secure their data. (How) Therefore, reassuring users and hence build their trust in the use of Big Data in Dating Apps. (Why) (Where)

Research

The IKEA virtual reality experience was released on Valve's game platform Steam in April 2016 and it allows consumers to walk around in a real size, make-believe 3D kitchen and interact with objects.

Similarly, an interactive experience to explore big data analytics in Dating Apps from their homes can also be created for consumers.

Studies (Marianne Dainton, Brooks Aylor, 2009) show that using apps like Skype and Facetime which enables face-to face interaction results in greater trust and satisfaction, compared to just talking over the phone. It follows that VR dating will achieve this to an even greater extent.

The capabilities of Virtual Reality have also improved vastly over the years. For example, MasterpieceVR is a technology company that is developing the most intuitive and powerful social 3D content creation platform using virtual reality.

With this in mind, an interactive VR Programme which involves the transparency of data use and the revolutionising of dating is a very achievable goal.

Solution #3: Free Data Control Feature

We, the owners of Data-Paired <mark>(who)</mark> , shall in the span of 4 years, <mark>(when)</mark> work together with Dating App Companies to implement a feature in the apps <mark>(where)</mark> that allows consumers have full control over their data <mark>(what)</mark>. For example, knowing who the data is being shared with and choosing what kind of data they would like to share in the app. <mark>(how)</mark> As a result, the users will feel more secure and thus increase trust between the Dating App companies and their user community. <mark>(why)</mark>

Research

According to Ben Jackson, there's no faster way to lose customer trust, and attract regulatory attention, than by failing to provide customers with required data subject access rights.

Businesses need to offer customers an intuitive portal through which they can control their own personal data. Making this control a key part of your customer experience will show that your taking their data as seriously as they do.

Solution #4: Remove Preference Option

We the owners of Data-Paired (who) will work with the dating apps to remove the preference options such as race on the app(what) so that people are able to widen their perspective (why) such that the people are able to use these apps safely (how) this can be done in most dating apps (where) and should be implemented in 2030 (when)

Research

"Probably the single most important thing you can do is remember that social media tends to create a bubble. Simply being conscious of this fact helps, as does making a point of stepping out of your echo chamber every so often and actively checking what people in the other camp are saying." Hence, similar to reduce the possibility of echo chambers in dating apps, we should broaden the users' horizon by allowing them to come into contact with more contrasting opinions and views such that they would not just interact with people of the same beliefs and views.

Solution #5: Revamp the signing up process

We the owners of data paired (who) shall in the span of 5 years (when) will work with dating apps to revamp the signing up process, i.e more information required and perhaps a interview with customer service before being enabled to use the app (what) thus the users will then have to complete a much stringent sign up process before being able to use it (how) this can be implemented in most dating apps (where) this can increase the trust amongst the users as there will be lesser worries of identity theft, thus users are more inclined to trust Dating Apps.(why)

Research

A streamlined user registration process, with the users phone number dating companies can more reliably validate and authenticate new users by utilizing the phone number as a trust anchor for authentication — and even customer communication — throughout the account lifecycle. They can also use a few patterns to identify potential fake accounts. For example, by understanding the carrier information and location associated with each phone number, you can check the country where attempted fake accounts came from. Hence you can ensure that there are lesser fake bots without deterring users from utilising the app.

STEP 4a. Select Criteria

Generate criteria to determine which solution idea does the best job of solving your Underlying Problem and/or addressing the Future Scene situation. Select the 5 most important criteria for measuring solution ideas and write them in the spaces provided.

Criterion #1:
Affordability
- Which solution will be the least costly for Dating Apps to implement so that the company would not suffer much economic loss.

Criterion #2
Convenience of adoption
- Which solution will be the easiest for Dating Apps to implement so that more users can benefit from it.

Criterion #3:
Effectiveness
- Which solution will be the most effective for Dating Apps to implement so that they can establish greater user trust.

Criterion #4:
Buy in rate
- Which solution will be the best accepted for Dating Apps to implement so that users are willing to use it.

Criterion #5:
Creativity
- Which solution is the most innovative and futuristic to increase the user's trust in Dating Apps

STEP 4b. Apply Criteria

List the solution ideas from Step 3 on the grid. Use each criterion to rank the solutions on a scale from 1 (poorest) to 5 (best). The weighting for one important criterion may be doubled if necessary.

Step 3 Sol'n #	Solution Idea	Criteria					Total
		1	2	3	4	5	
#1	Implement a safety course where the users are required to enrol in before using the app	5	5	2	1	4	17
#2	Launch an interactive Virtual Reality Programme	1	3	5	4	5	18
#3	Implement a feature in the apps that allows consumers have full control over their data	2	2	4	5	3	16
#4	Remove the preference options such as age, race on the app	4	1	1	3	2	11
#5	Revamp the signing up process	3	4	3	2	1	13

STEP 5. Develop an Action Plan and Evaluate its Feasibility

Develop your top-scoring solution idea into an Action Plan. Thoroughly explain how the Underlying Problem is solved, how the plan will be implemented, and how the community / organisation will be affected. Explain how this Action Plan is feasible with secondary research consulted, preferably also with primary research (feedback from chosen community / organization)

Action Plan derived from Solution #2 :

We, the owners of data paired collaboration with the developers of Dating Apps, (Who) shall in the span of 5 years, (When) launch an interactive Virtual Reality Programme. (What) This programme will allow users to view how their data is used through Artificial Intelligence (AI) algorithm and machine learning to do a better match. In addition, they will be able to see the various data encryption software in place to secure their data. (How) Therefore, reassuring users and hence build their trust in the use of Big Data in Dating Apps. (Why) (Where)

Furthermore, users can also embark on a VR date. It should be a more intense and personal experience than online dating. Moving from screen to VR invokes "presence" — the feeling of actually being in the virtual space itself.

How does our plan address the KVP
Our plan gives the users enough time to slowly adapt to the introduction of such technologically advanced pieces of equipment to make them able and enable it to be effectively used to then educate the users and allows them to build trust with the dating app companies that handle majority of their data.

How does our plan address the UP's purpose
Our plan allows the users to look through how their data is handled and thus would have understood that their personal information are handled responsibily by the dating app and their trust shall be gained by the app, so they would use the app without worries

What is our timeline for implementation
By 2025, the dating app companies would have worked with the virtual reality simulation companies to start in the new development of a simulation, by 2028 the first prototype shall be made and in 2030, the apps would have implemented it into their operation. By 2031 all the apps would have been required to have it before they are allowed to operate in the Singaporean market

What obstacles might be encountered
Some of these dating apps may be opposed to the implementation of the virtual reality simulation, as the development of it may be costly and some of these dating apps organisation are reluctant to implement it into their system, not all the companies have the necessary funds for it

---

(Action Plan Continued)

How would we solve these obstacles

To ensure that the dating app companies implement the virtual reality simulation, there would be taxes for the companies that do not implement this virtual reality simulation. The money that is lost through tax would eventually be higher than the cost of developing. Thus, the dating app companies would rather put the finances towards developing and implementing the virtual reality simulation or the government can provide some funding to assist the companies that are unable to afford.

Who can we work with

We can work with virtual reality simulation programmers who can help us create a simulation that can be easily implemented into the dating app. We can also work with government to implement taxes for those companies who do not comply by implementing these virtual reality simulations.

Who would support our plan

The government and users of the dating apps would support our plan, the government as currently many young adults are on such app with user penetration being 3.7% in 2020 and is expected to rise to 5.4% in 2024 and they want them to be safe on the apps. And the users want to know whether their personal information is kept safe and with this virtual reality tour the users can be rest assured that their data is kept securely and responsibly

Who would oppose our plan

The dating app companies may oppose our plan due to its high cost for the implementation and some may not want to spend that much of its budget on it as there might be other uses for the money and some companies may not see the need for such expensive high tech equipment to be implemented

How feasible is our plan

Asia pacific spending on augmented reality and virtual reality is expected to reach $7.5 billion in 2019 which is an increase of more than 100%. Hence with this growing market, there will be more application for virtual reality in our society such as dating apps and, Singapore government will eventually invest more money to fund such virtual reality to provide financial aid to some of the struggling dating app companies

Our organisation

Concept: Very applicable to the problems. It has potential. Timeline of implementation is very reasonable.

Bibliography

Cite the resources you consulted using the APA format.

List of References:

1. Staff in Life (2017, June 27). Five Ways to Break Out of Your Online Echo Chamber. Retrieved August 08, 2020, from https://www.highsnobiety.com/p/echo-chamber-fix/

2. Read, D., & Scott Ikeda· (2020, January 30). Many of the Major Dating Apps Are Leaking Personal Data to Advertisers. Retrieved August 08, 2020, from https://www.cpomagazine.com/data-privacy/many-of-the-major-dating-apps-are-leaking-personal-data-to-advertisers/

3. GDI Content Partners. (2020, July 23). Making sure people are real in a virtual world. Retrieved August 08, 2020, from https://www.globaldatinginsights.com/content-partners/realme/making-sure-people-are-real-in-a-virtual-world/

4. GDI Content Partners. (2020, January 31). What is Project Artemis? Retrieved on August 08, 2020, from https://www.globaldatinginsights.com/content-partners/courtland-brooks/what-is-project-artemis/

5. Dominic Whitlock. (2020, January 8). Google gives dating industry helicopter perspective on the GDI podcast. Retrieved on August 09, 2020, from https://www.globaldatinginsights.com/featured/googles-john-senyard-gives-dating-industry-helicopter-perspective-on-the-gdi-podcast/

6. Susan Morre. (2020, January 20). Gartner predicts for the future of privacy 2020. Retrieved on Aug 08, 2020, from https://www.gartner.com/smarterwithgartner/gartner-predicts-for-the-future-of-privacy-2020/

7. James, H. (2019, July 08). Customer spending on augmented and virtual reality doubles. Retrieved August 10, 2020, from https://www.channelasia.tech/article/663768/customer-spending-augmented-virtual-reality-doubles/

8. Online Dating - Singapore: Statista Market Forecast. (n.d.). Retrieved August 10, 2020, from https://www.statista.com/outlook/372/124/online-dating/singapore

9. Mary, A (2020, March 16). Privacy and Security Risk from Dating apps. Retrieved August 10, 2020, from https://clario.co/blog/live-secured/privacy-security-risks-of-dating-apps/

10. Sherri, G (2020, January 28). How to use online dating apps safely. Retrieved August 10, 2020, from https://www.verywellmind.com/how-to-use-online-dating-apps-safely-4707582#staying-safe-while-using-dating-apps

11. Rob Waugh (2014). Tinder Dating App Gave Away Exact Locations Of Users For Months. Retrieved on March 25, 2020, from https://www.welivesecurity.com/2014/02/20/tinder-dating-app-gave-away-exact-locations-of-users-for-months

12. SAS (n.d.). Structuring SAS Data Sets Data Analysis Using SAS®. Retrieved on March 15, 2020, from https://www.sas.com/en_sg/insights/big-data/big-data-marketing.html

13. Simon Worrall (2018). Computers tell us who to date, who to jail: But should they? Retrieved on February, 2020, from https://www.nationalgeographic.com/science/2018/11/algorithms-big-data-computer-dating-book-talk/

List of References:

14. Amer Owaido (2020). Dating Apps Share Personal Data with Advertisers, Study Says.Retrieved on March 13, 2020, from
https://www.welivesecurity.com/2020/01/22/dating-apps-share-intimate-data-advertisers-study/

15. Bernard Marr (2018). How Much Data Do We Create Every Day? The Mind-blowing Stats Everyone Should Read. Retrieved on March 14, 2020., from
https://www.forbes.com/sites/bernardmarr/2018/05/21/how-much-data-do-we-create-every-day-the-mind-blowing-stats-everyone-should-read/#324d512360ba

16. David Grimes (2017). Echo Chambers Are Dangerous – We Must Try To Break Free Of Our Online Bubbles. Retrieved on March 13, 2020, from
https://www.theguardian.com/science/blog/2017/dec/04/echo-chambers-are-dangerous-we-must-try-to-break-free-of-our-online-bubbles

17. Innovation Enterprise (n.d.). Infographic: Big Data In Everyday Life: Articles: Chief Data Officer. Retrieved on Marh 13, 2020, from
https://channels.theinnovationenterprise.com/articles/infographic-big-data-in-everyday-life

18. Jane Mayer (2018). How Russia helped swing the election for Trump. Retrieved on March 20, 2020, from. https://www.newyorker.com/magazine/2018/10/01/how-russia-helped-to-swing-the-election-for-trump

19. Kari Paul (2018). Democrats and Republicans Can't Even Use the Same Dating Apps Anymore. Retrieved on March 20, 2020, from https://www.marketwatch.com/story/liberals-and-conservatives-cant-even-use-the-same-dating-apps-2017-08-28

20. Louise Matsakis (2019). How the west got China's social credit system wrong. Retrieved on February 27, 2020, from https://www.wired.com/story/china-social-credit-score-system/

21. Marketwatch. (2017, August 28). Liberals and conservatives even have their own dating apps. Retrieved on April 13, 2020, from https://nypost.com/2017/08/28/liberals-and-conservatives-even-have-their-own-dating-apps

22. Merriam Webster "Definition of free will" Merriam Webster Since 1828. Retrieved on February 20, 2020, from https://www.merriam-webster.com/dictionary/freewill

23. Paul Lewis and Paul Hilder (2018). Leaked: Cambridge Analytica's blueprint for Trump victory. Retrieved on March 20, 2020, from https://www.theguardian.com/uk-news/2018/mar/23/leaked-cambridge-analyticas-blueprint-for-trump-victory

24. Steven Handel (2018). How social media creates FOMO and why you should minimize your time on the internet. Retrieved on Fenruary 27, 2020, from https://www.theemotionmachine.com/how-social-media-creates-fomo-and-why-you-should-minimize-your-time-on-the-internet

25. Tantan (2017). Term of Service. Retrieved on March 23, 2020 from
https://tantanapp.com/en/about/terms/

List of References:

26. Tinder (2019). Terms Of Use. Retrieved on March 23, 2020, from
    https://policies.tinder.com/terms/us/en
27. Will Heilpern (n.d.). 18 False Advertising Scandals That Cost Some Brands Millions.
    Retrieved on March 25, 2020, from
    https://www.businessinsider.com/false-advertising-scandals-2016-3?IR=T
28. Yubo (2020). Privacy. Retrieved on March 23, 2020, from https://yubo.live/privacy
29. Yuval Noah Harari (2016). Yuval Noah Harari on big data, Google and the end of free will.
    Retrieved on February, 2020, from https://www.ft.com/content/50bb4830-6a4c-11e6-ae5b-a7cc5dd5a28c