“Thoughts”

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“What do you think? Who really thinks like you?”

Three-Tier or N-Tier

I feel that my project requires the presentation which I consider frontend.

* (A)the survey must be generated so a list of questions. (The questions need to be polarizing to engage the person. Starting with a polarizing topic would help encourage engagement. The follow-on questions will be probing for data that essentially can become very specific)
* HTML5 and the CSS (Simplicity in color like two tone. A yellow bar at the top and a blue background. I think this stands out and helps get the attention without distracting. I want emotion to drive the app not so much aesthetics)
* (B)survey page (because I want binary data to work with the model will be yes or no or true or false type questions. This means that the questions need to have a point in mind that can be easily answered.)
* (C)response page (Issues with auto loop could occur so I should be prepared to try a variety of options to accomplish this, one being reaching out to higher echelons of help.)

  Then the business end would be the backend where data is being collected.

* capture data from the survey (I believe this was done is a previous class and this will be what I use to push the data to a server. I want to capture the info that is entered and then the answers to the questions. I want it to develop in something that can easily be pasted into Excel or other software sued for transformation and manipulation)
* (D)capture data from answers (make one page to minimize pages. Same concerns from above apply and therefore this will have the highest risk because it affects the most aspects of the project I would say. I believe that using the model from the previous class. I can also consider trying to adapt this concept to whatever language is being used in case the previous project does not match)
* (E)push all data to storage (issues with capturing the data or rather storing it. I can push it to a temporary serer at the moment for testing purposing and perhaps beta launch)

  Finally, the database would store the data collected.

* (F)Once I have the data, I can manipulate it in a variety of ways. For the prototyping I am going to focus on car types. There is gas ana electric and they seem to become competitors in the market. I want to leverage data. Essentially, I want to be able to help predict via data the likelihood of a person to buy gas vs electric car. This can be sold to say Ford as data to help gear not only marketing but also RnD. This is just one model. I can create different surveys to capture or focus on different things. I was thinking as an addendum or perhaps version 2.0, I let the user create a question for a survey. It is how independent driven surveys can be populated in the future.)

Background

Personality traits: The Big 5

1. **Conscientiousness**
   1. impulsive, disorganized *vs.* disciplined, careful
2. **Agreeableness**
   1. suspicious, uncooperative *vs.* trusting, helpful
3. **Neuroticism**
   1. calm, confident *vs.* anxious, pessimistic
4. **Openness to Experience**
   1. prefers routine, practical *vs.* imaginative, spontaneous
5. **Extraversion**
   1. reserved, thoughtful *vs.* sociable, fun-loving

CSV:

<https://realpython.com/python-csv/#what-is-a-csv-file>

<https://www.researchgate.net/publication/225104850_The_Positive_Personality_Traits_Questionnaire_Construction_and_Estimation_of_Psychometric_Properties>

<https://cloud.google.com/>

<https://www.viacharacter.org/>

<https://www.idrlabs.com/short-big-five/test.php>

Methodology of using short Big five personality test

<https://gosling.psy.utexas.edu/wp-content/uploads/2014/09/JRP-03-tipi.pdf>

<https://www.researchgate.net/publication/242091149_Conducting_Market_Research_Using_Primary_Data>

**ISSUE:** Validity Tests

**VALIDITY:**Validity is defined as the degree of agreement between the claimed measurement and the real world. There are three categories of validity test, namely: (i) content validity, (ii) criterion validity, and (iii) construct validity. Content validity seeks to answer the question of whether the current test covers all relevant items needed to answer the research question. Criterion validity is the degree of correlation between the current test to the predetermined standard. The predetermined standard scores are those that had been tested by prior studies and had been held to be valid. Construct validity is the degree to which the test actually measures what the theory claims.

**(i) Face Validity.** Use the respondents to answer the question: *Does the survey or test measure what it intended to measure?*This is the subjective view of the respondents to the survey (not experts). Use this as a test-run before distributed the real survey.

**(ii) Content Validity.** Use expert panel to answer the question: *Is the question or skills measurement int he test "essential" to the intended measurement?* Form a panel of subject mater experts (SME) and then ask them whether your intended questions or survey is relevant to your intended research issue? Use the Lawshe test:

CVR = [(ne - N)-N/2 ] / 2

... where CVR = content validitt ratio' ne = number of experts in the panel answered "yes, relevant"; and N = total number of experts in the panel.

**(iii) Construct Validity.** There are two kinds of construct validity: *(a) convergent validity and (b) discriminant validity.* A convergent construct validity exists when *what is expected to be correlated indeed turns out to be correlated*, thus H0: r = 0 and HA: r not equal to 0. The result shows that H0 is incorrect and, thus, is rejected. Whereas, in discriminant validity, r = 0; H0 cannot be rejected. Use correlation coefficient as the unit of analysis.

**INTERNAL CONSISTENCY:** It appears that the Cronabach's alpha is a common test. However, Cronbach himself had recently admitted that the Cronbach’s alpha is not an appropriate test for reliability. Cronbach wrote that:

“I no longer regard the alpha formula as the most appropriate way to examine most data. Over the years, my associate and I developed the complex generalizability (G) theory. (Cronbach et al. (1963); Cronbach et. al. (1973); see also Brennan (2001); Shavelson and Webb (1991), which can be simplified to deal specifically with a simple two way matrix and produce coefficient alpha (Cronbach (2004), p. 403). Cited in N.M. Webb, R.J. Shavelson and E.H. Haertel (2006). “Reliability Coefficients and Generalizibility Theory.” Handbook of Statistics, Vol. 26, p. 2. ISSN 0169-7161.

Therefore, the use of Cronbach’s alpha must be reexamined. This is not to say that Cronbach’s alpha is not usable; its use and interpretation, however, must be modified. It is a tool to determine whether the response is consistent; this is different from asking *whether the instrument produces consistent response?*.

**REFERENCES:**

[1] Cronbach, L. J. (1951). Coefficient alpha and the internal structure of tests. Psychometrika, 16,297-334.

[2] Cronbach, L. J., & Meehl, P.E. (1955). Construct validity in psychological tests. Psychological Bulletin, 52, 281-302.

[3] Lawshe, C.H. (1975). A quantitative approach to content validity. Personnel Psychology, 28, 563–575.

[http://books.google.co.th/books?id=pa5vKqntwikC&pg=PA637&redir\_esc=y#v=onepage&q&f=false](https://www.researchgate.net/deref/http%3A%2F%2Fbooks.google.co.th%2Fbooks%3Fid%3Dpa5vKqntwikC%26pg%3DPA637%26redir_esc%3Dy%23v%3Donepage%26q%26f%3Dfalse)

[G Theory Hdbk of Stat](https://www.researchgate.net/profile/Paul_Louangrath/post/What_is_the_best_method_to_validate_a_questionnaire_based_on_a_5_point_Likert_scale/attachment/59d639d3c49f478072ea6444/AS%3A273721141465103%401442271613754/download/G+Theory+Hdbk+of+Statistics.pdf)

[istics.pdf](https://www.researchgate.net/profile/Paul_Louangrath/post/What_is_the_best_method_to_validate_a_questionnaire_based_on_a_5_point_Likert_scale/attachment/59d639d3c49f478072ea6444/AS%3A273721141465103%401442271613754/download/G+Theory+Hdbk+of+Statistics.pdf)

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Cron bach

<https://www.rdocumentation.org/packages/ltm/versions/1.1-1/topics/cronbach.alpha#:~:text=The%20standardized%20Cronbach's%20alpha%20computed,i.e.%2C%20rows)%20are%20used>.

https://mattchoward.com/calculating-cronbachs-alpha-in-r/