

IBM Watson

Personality Insights

[Links, Best Practices, Source Code, and Tools](#)

IBM



Welcome to Personality Insights

This document will help you get started.

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More Handbooks

Intro to Watson Development

<https://ibm.box.com/s/nav52vt6q2xwib5zqwupwf78mxtgems>

Retrieve and Rank (R&R) Handbook

<https://ibm.box.com/s/n0lqowt0v97nxb5mtei6qrbbkbt02dm>

Natural Language Classifier (NLC) Handbook

<https://ibm.box.com/s/rdlog2sue79178816s0rabkbi7ifu5vg>



Docs, Tools, and Community

-  **PI on the WDC:** <https://www.ibm.com/smarterplanet/us/en/ibmwatson/developercloud/personality-insights.html>
Read this PI section of the Watson Developer Cloud to learn all about the service.
-  **PI on the Stack overflow:** <http://stackoverflow.com/questions/tagged/personality-insights>
Read questions and get answers from other Watson PI developers.
-  **Webinar: PI + Sentiment** - <https://goo.gl/kqisZQ>
Learn how to combine Watson sentiment analysis with Personality Insights
-  **Webinar: PI + Node Red** https://www.youtube.com/watch?v=43i_y-kEOj4
A recent webinar on by combing IBM's Node Red with Personality Insights

Code Libraries & SDKs

-  **NodeJS Watson Library:** <https://goo.gl/2nhR1n>
Kick start your Watson NodeJS development.
-  **Java Watson Library:** <https://github.com/watson-developer-cloud/java-sdk>
A library of Java utilities to jump start your Watson development.
-  **iOS/Swift Watson Library:** <https://github.com/watson-developer-cloud/ios-sdk>
Checkout this NodeJS library to kick start your Watson development.

Important Reading material + Demos



Science Behind Personality Insights

The PI team provided extensive details on the science behind the PI service: <http://goo.gl/iodMXC>

And this blog post describes more details on how the PI team validated the service: <https://goo.gl/bKWiK6>



Research References

Refer to these published articles on how to find actionable insights from the the 50+ personality traits provided by the service,

<http://www.ibm.com/smarterplanet/us/en/ibmwatson/developercloud/doc/personality-insights/references.shtml>

Demos



Using PI to interpret a movie adaptation of Tolkien's famous novel.
<http://vinmisra.github.io/2014/12/19/gollum-is-a-pretty-vulnerable-guy/>



Explore American presidencies using PI + State of the Union Speeches
<https://developer.ibm.com/watson/blog/2015/01/21/watson-state-union/>



Visualize your PI results
<https://watson-pi-demo.mybluemix.net/>



Applying PI to better understanding Harry Potter
<http://www.techinsider.io/ibms-watson-analyzed-harry-potter-2016-3>

 Top Demos

User Segmentation using Jungian Archetypes

Segmenting users can be a challenge. Here's a clever approach

The hardest challenge faced by new users of Personality Insights is generating actionable insights from the ~50 traits analyzed by PI. A first step is often to translate these low level traits into higher level meta-personae that people are more familiar with. This demo provides a an approach for matching PI traits to the Jungian archetypes.

Proceed with caution is the results of this demo have not been fully validated. But the general approach will be useful to understand.

Blog Post: https://dreamtolearn.com/ryan/data_analytics_viz/99

The Creator

AKA:
artist, entrepreneur, visionary, storyteller

DESCRIPTION:
The Creator is confident in how to translate her imagination into reality. The result is all that matters – to create something enduring and of value for future generations

TYPE & ORIENTATION:
Soul > Ego

CELEBRITIES:
Steve Jobs, Steven Spielberg, Elizabeth Holmes, Wes Anderson, Margaret Atwood, JK Rowling



The Explorer

AKA:
adventurer, pioneer, seeker

DESCRIPTION:
The Explorer goes forth to seek adventure and experiences! Life is not about having, but about doing and feeling. Exciting journeys leading to new and interesting destinations.

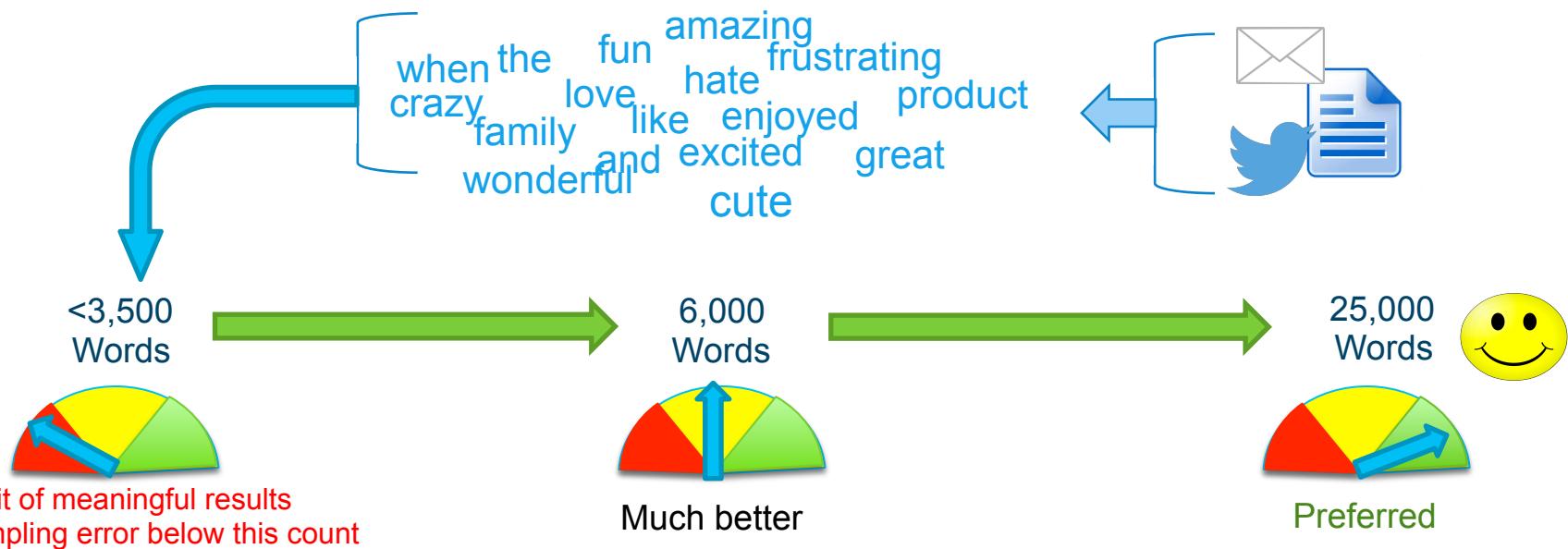
TYPE & ORIENTATION:
Soul > Freedom

CELEBRITIES:
James Cameron, Neil Armstrong, Jane Goodall, Sir Edmund Hillary, Eddie Aikau, Bear Grylls



Best Practice**Ensure you have enough words written by the person being analyzed****Decrease your sampling error!**

The input to PI has two basic requirements. First, the text must be written by the person being analyzed. Second you have to have enough words (>3,500) to obtain a sufficiently small sampling error. Read the details on the word count requirement: <http://goo.gl/r7lmon>



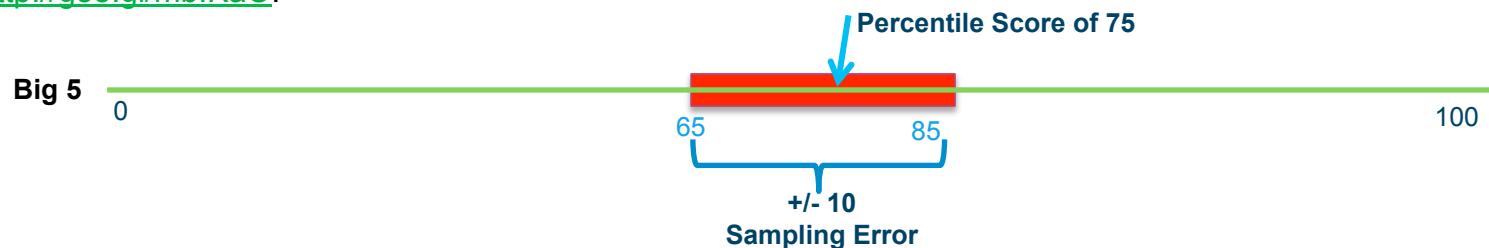
 Best Practice

Understand percentile scores and sampling error

Two key statistical data points returned by P.I.

PI returns two values for each personality trait: percentile score and sampling error. These percentiles are based on the population sample used to train PI and the numeric value represents where the person ranks among the general population. So a score of 75 for sympathy would mean a person is more sympathetic than 75% of the average population but less sympathetic than 25%. The sampling error will go down as more data is submitted to PI for a person. More details can be found here:

<http://goo.gl/mblKaO>.

 Best Practice

Use raw scores to match your dataset's percentiles

Optimize PI for your own type of data

If you're using email, LinkedIn, or other non-social media text, then we highly recommend using raw scores to normalize the output from PI to match the percentiles of your dataset. More information on raw scores and normalizing your data can be found here: <http://goo.gl/mblKaO>.

 Best Practice

Validated uses cases for PI

Learn from the research community!

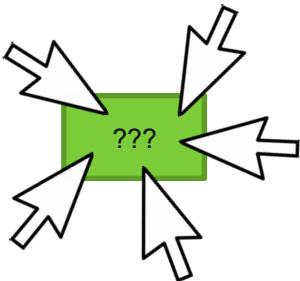
A list of validated uses for PI can be found here along with the supporting research: <http://goo.gl/hgrh37>. As you can see, it typically takes 1,000+ subjects to validate a use case. So if you plan to apply PI to a use case not listed here, then determine how you can get data on 1,000+ subjects and run an experiment yourself to validate your novel use case.

Example 1: Spread of Information



- Big Five > Extraversion > Friendliness (HIGH)
- Big Five > Agreeableness > Modesty (HIGH)
- Big Five > Openness (HIGH)

Example 2: Click-Thru Rates



- Target top 10% 2x increase in click thrus
- Big Five > Openness (HIGH)
 - Big Five > Neuroticism (LOW)

Example 3: Coupon Redemption 40% more likely



- Big Five > Conscientiousness > Orderliness (HIGH)
- Big Five > Conscientiousness > Self-discipline (HIGH)
- Big Five > Conscientiousness > Cautiousness (HIGH)
- Big Five > Emotional Range > Immoderation (LOW)



Proactive filtering for specific PI traits

Choose people that match a desired profile

A common approach to using PI relies on presenting a user with a user interface (UI) to select a specific range of traits to see which profiles match those trait ranges. To successfully apply this design pattern, you should have a clear understanding of which trait ranges to select else you're "shooting in the dark" and unlikely to have positive results. To see how others have determined which ranges to select, [read the "Best Practices" section above on "Validated uses cases for PI."](#)

UX for "arbitrary" filtering for specific trait ranges

If you do provide users a UI allowing the arbitrary selection of traits, we recommend a slider similar to this for Morality:



Note the clarifying words plus hover box. These highlight that being high or low in a trait is not necessarily "bad" but indicates a user's tendency to one end of a spectrum. For Big 5, the descriptions for either end of the spectrums can be found here:
<http://www.ibm.com/smarterplanet/us/en/ibmwatson/developercloud/doc/personality-insights/models.shtml#outputNeeds>.

 **Using data science to match PI traits to desired outcomes****Use analytics to let the data tell you which traits match desired profile**

This approach typically requires a data scientist or someone skilled in statistics. They can analyze a large dataset of profiles to determine which traits are indicative of a specific end action. That is typically the approach taken by the “[Validated uses cases for PI](#)” in the “[Best Practices](#)” section above.

E.g. for the “Spreading Information” study, a large number of Twitter users were asked to spread information. Then the profiles of those that retweeted information to strangers were analyzed to see which traits were indicative of a propensity to retweet.



“Recommending targeted strangers from whom to solicit information on social media”, 2013: pp. 37-48
Mahmud, Jalal, Michelle X. Zhou, Nimrod Megiddo, Jeffrey Nichols, and Clemens Drews, Proceedings of the Int'l Conference on Intelligent user interfaces

Design Pattern Mapping PI's Traits to “Meta” Personae

It's often useful to reduce the 50+ traits to more intuitive personae

There are numerous personality models available in the research literature. Most are not as formal or as well researched/documentated as Personality Insight's Big 5/Needs/Values. However the other personality models may use terminology that's more intuitive for specific use cases.

E.g. Mapping Traits to Personae in the Sales domain

The challenge is how to map the 50+ traits from PI into higher level categories. For example, here are various personality types discussed in various sales selling approaches. We leave it as an exercise for your data science team to create the actual mappings to these personae. If you're unsure how to proceed, see the Design Pattern slide in this deck on “Using data science to match PI traits to desired outcomes” for guidance.

12 Jungian Archetypes¹

The Innocent	The Rebel
The Hero	The Lover
The Regular Guy	The Magician
The Nurturer	The Ruler
The Creator	The Jester
The Explorer	The Sage

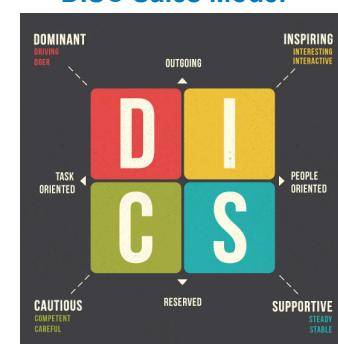
Challenger Selling Profiles^{2,3}

Relationship Builders	Reactive
Problem Solvers	Hard
Workers	
Lone Wolves	
Challengers	

Social Styles in Sales⁴

Analyticals	(The Clinicians)
Amiables	(The Supporters)
Expressives	(The Socializers)
Drivers	(The Directors)

DISC Sales Model⁵



¹ https://dreamtolearn.com/ryan/data_analytics_viz/99

² <http://www.thechemistrygroup.com/wp-content/uploads/2015/07/Challengers-of-Challenger.pdf>

³ <https://hbr.org/2011/09/selling-is-not-about-relatio>

⁴ <http://www.socialmediatoday.com/content/key-negotiating-four-personality-types>

⁵ <http://undergroundelephant.com/psychology-of-selling-4-personality-trait-you-need-to-know/>