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Investment

Adamant Links Product Overview





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Why, Real-Time Personality Predictions ?



Real-Time Psychographic Segmentation

Different personalities have different behaviors, needs and desires (as shown in the above image). Their perception is based on their internal values, and their values are influenced by their personality. A product's presentation and price may appeal to a specific personality trait but have the opposite effect on other personalities. A general approach in marketing only addresses a segment of the audience, while at the same time alienates other segments.

A real time prediction approach allows for a real-time adjustment of the marketing message and strategy to target all segments with equal efficiency.

Soft Bio-metrics Bounce Rate

One of the most valuable need in online marketing, and least researched is identifying the leaving visitor's profile directly on the website. Now, without the use of any kind of invasive data collector, the unique software Adamant Links can provide the marketing department with a flow of never before seen data. While we can measure traffic, conversion rate and bounce rates there is little we can do to determine the portrait of the leaving visitor - age, gender, personality type, spending probability (Adamant Links) and to better understand the path that lead to his departure, in order to improve our strategy and product presentation thus increasing the sales and conversions. Adamant Links offers the possibility to track the age, gender, personality profiles of visitors, and show an exact picture of each leaving visitor leading to a better understanding of his or her decisional path. This allows for strategic adjustments in the content, campaigns and ads to reduce the loss rate of possible clients.



Concepts





Soft Bio-metrics

Physical, behavioral or cognitive human differences, representative for grouping individuals in specific categories.

Intent

Value associated to page elements from a customer's perspective.

Predictions

Determine visitors core traits (personality traits, age, gender, purchase behavior) based on non-invasive collected data in minutes.



Keyboard Dynamics

Individual characteristics based on manner and the rhythm of typing on a keyboard.

Concrete Actions

Reflects conscious behavior towards a specific outcome.

Mouse Patterns

Behavior, patterns, motions and metrics associated with mouse movements.





Data Collection

Non-invasive, anonymous data collection using a JavaScript, custom made for your site, collects usage and behavior data. Adamant Links tracks 130 content elements and 86 related behaviors, aside from keyboard dynamics and mouse movement.

Identifying information about the user (name, IP address, cookies and any other) is **never** stored or tracked.

Collected data is stored in browser storage until a request to the predictions REST API is made.

How does it work?

The Adamant Links REST API encapsulates several prediction algorithms. Content, keyboard and mouse data are processed and more than 40 statistical metrics are extracted. While processing, we also eliminate data that is not statistically relevant for intent, for example, when an element in the web-site is accidentally interacted with.

Statistically obtained metrics are linked with personality, behavior and intent predictors specific for personality, gender, age and probability of purchase. Based on this correlation a score is determined. The whole process of interpretation, statistical analysis, predictor linking and scoring takes a few milliseconds.

Through our testing, we established an optimal window for predictions is between 30 seconds (a minimal timeframe required for a relevant prediction) to 120 seconds (when we observed that enough relevant data has been optimally collected).

Predictions

Predictions scores are returned to the website JavaScript and sent to a client hosted dashboard application.

On the website, the real-time predictions allow for content, ad and campaign adjustments specific to each visitor.

Data stored in the dashboard shows the characteristics and metrics for visitors that convert or that bounce from the website, the personality of users and their behavior, market segmentation and other relevant measurements.





General Predictions

Adamant Links is a soft bio-metrics prediction tool. Using non-invasive (it does not interact with the user), anonymous (it does not use any user related information like name, email, IP, cookies, localisation etc.), plug-and-play (JS script applied over the site without changing the functionality or the behavior of the site), lightweight (REST Web Service working with JSON data) methods is able to predict the following:

Gender Predictions

Adamant Links predicts the biological gender of the user with an accuracy of 74% (worst case scenario; some cases where accuracy is lower include: under the influence of alcohol, disengagement, multi-tasking, distractions) up to 84.6% (in an optimal scenario, referring to normal usage of the site).

Please note that gender prediction does not refer to self-identify genders, sexuality or sexual preferences or emotional/mental gender tendencies. The prediction mechanism is based on biological differences between male and female visitors (subjects).

Age Predictions

Adamant Links predicts the mental age of the user with an accuracy of **70%** (worst case scenario; teenager behavior in terms of motor functions is similar to older adult's motor functions) up to an accuracy of **89%** (in an optimal scenario; normal user with normally developed motor functions).

Purchase Probability Predictions

Adamant Links predicts the probability of a purchase taking place in the current session. However, the accuracy for this prediction is not measured at the moment (without a study group; as all collected samples were obtained under laboratory-controlled environments).. While this feature can be considered a minor feature, with the help of a willingly participating partners this can be improved. The basic idea is that the probability of purchase decreases with the manifestation of certain behaviors like:

- Window shopping
- Excessive use of wish list
- Lack of homogeneity in search criteria



Personality Predictions

Within electronic markets more and more recommendation systems are employed in order to improve the pre-selection of available products and services (Adomavicius and Tuzhilin 2005). Determining a user's preferences is an important condition for effectively running these automatic recommendation systems (Xiao and Benbasat 2007). Personality theorists claim that a individual's personality traits have a substantial influence on preferences and subsequently on behavior.

The human personality significantly influences the way people think, feel and, especially, behave (Barrickand Mount 1991; Judge et al. 1999). Personality traits are defined as endogenous, stable, hierarchically structured basic dispositions governed by biological factors such as genes and brain structures (Romero et al. 2009, p. 535). These traits remain quite stable over the entire lifetime and through varying situations (Costa and McCrae 1992;Romero et al. 2009), and that is why a user's personality is a good starting point for predicting user behavior $\hat{a} \in$ especially in electronic markets where digitized information for mining a user's personality is available(e.g., Blachnio et al. 2013; Kosinski et al. 2014).

"Predicting user behavior in electronic markets based on personalitymining in large online social networks" - Ricardo Buettner 2017 Personality is an easy concept for most of us to grasp. It's what makes you, you. It encompasses all the traits, characteristics, and quirks that set you apart from everyone.

Adamant Links can predict visitor's personality, using the OCEAN/Big Five model, with an accuracy of more than 90% for the overall profile.

In fact, Proceedings of the National Academy of Sciences provides evidence for how psychological targeting such as targeting by personality's a proven approach to persuasion. Their research tests the difference between targeting viewers with ads based on whether they are extroverted or introverted: results show that when targeting viewers based on this, conversion rates double. This shouldn't be surprising that people are attracted to things that exhibit similar personalities to them or brands that represent the way they are. Thus, it's so important to execute marketing activities as it relates to a target audience's personality traits. You wouldn't target those who are high in one trait the same as those who are low in it. For example, let's assume a brand is looking to create ads for a new pair of yoga pants. Women high in extroversion are likely to relate to an ad showing multiple people. Women low in extroversion, but high in conscientiousness, would likely relate more to an ad showing a single person enjoying themselves.

> "Using the Big 5 Personality Traits to Understand Consumers" www.greenbookblog.com





Big Five OCEAN

Personality Model

Today, many researchers believe that there are five core personality traits. Evidence of this theory has been growing for many years, beginning with the research of D. W. Fiske (1949) and later expanded upon by other researchers including Norman (1967), Smith (1967), Goldberg (1981), and McCrae & Costa (1987).

OPENNESS to **EXPERIENCE**

This trait features characteristics such as imagination and insight. People who are high in this trait also tend to have a broad range of interests. They are curious about the world and other people and eager to learn new things and enjoy new experiences.

People who are high in this trait tend to be more adventurous and creative. People low in this trait are often much more traditional and may struggle with abstract thinking.

CONSCIENTIOUSNESS

Standard features of this dimension include high levels of thoughtfulness, good impulse control, and goal-directed behaviors.

Highly conscientious people tend to be organized and mindful of details. They plan ahead, think about how their behavior affects others, and are mindful of deadlines.



EXTROVERSION

Extroversion (or extraversion) is characterized by excitability, sociability, talkativeness, assertiveness, and high amounts of emotional expressiveness.People who are high in extroversion are outgoing and tend to gain energy in social situations. Being around other people helps them feel energized and excited.

People who are low in extroversion (or introverted) tend to be more reserved and have less energy to expend in social settings. Social events can feel draining and introverts often require a period of solitude and quiet in order to "recharge."

AGREEABLENESS

This personality dimension includes attributes such as trust, altruism, kindness, affection, and other pro-social behaviors.

People who are high in agreeableness tend to be more cooperative while those low in this trait tend to be more competitive and sometimes even manipulative.

NEUROTICISM

Neuroticism is a trait characterized by sadness, moodiness, and emotional instability.

Individuals who are high in this trait tend to experience mood swings, anxiety, irritability, and sadness. Those low in this trait tend to be more stable and emotionally resilient.



Big Five / OCEAN

Several independent sets of researchers discovered and defined the five broad traits based on empirical, data-driven research. Ernest Tupes and Raymond Christal advanced the initial model, based on work done at the U.S. Air Force Personnel Laboratory in the late 1950s.1 J.M. Digman proposed his five factor model of personality in 1992, and Goldberg extended it to the highest level of organizations in 1993. In a personality test, the Five Factor Model or FFM and the Global Factors of personality may also be used to reference the Big Five traits.

What personality tells us about people?



Relevant attributes (emotional, ordered, seeking experience, seeking safety etc.) that define the high and low values of each dimension of the Big Five Personality Profile.

Communication

Different personalities prefer and respond to different communications styles and strategies as defined by the The Communication Styles Inventory (CSI).

Preferences

Studies tie preferences in movies, music, colors, parenting, automobiles, video games, exercise, shopping, money management and many others to the Big Five Personality Profile.

Values

\$

Each dimension of the Big Five Personality Profile influences the intrinsic set of values (power, benevolence, conformity etc.) of each individual. Variation in the dimension values of each person increase or decreases the likelihood of them adopting a certain value.

Persuasion

Based on the Cialdini's Persuasion Techniques (authority, social proof, scarcity etc.), each personality is more or less prone to response to each technique.

Shopping Motivation

Each personality is either more hedonistic or utilitarian in their shopping motivation. Studies also link personality with impulsive and compulsive purchase predisposition.

Behavior

The way each dimension of the Big Five Personality Profile influences the behavior each individual manifests, the internal motivation for certain behaviors and the predisposition for others.



Social Media

Studies link the activity on social media (likes, pages, comments, the words they most frequently use, photos, visits, time spent etc.) to each personality type. Not all people are interested in social media ads and campaigns.

Smart Phone Usage

Each personality type has their different way of using the smart phones. Ranging from highly active on social media and e-commerce applications to just using the basic functionalities of a phone.





How to use the Adamant Link predictions?

Adamant Links provides real-time predictions based on user behavior. This allows for two main courses of actions:

- 1. Real-time adjustments to the website contents, showed campaigns and ads, based on the predicted personality, gender and age of each online user.
- 2. Long term statistics by collecting predictions in a database and then generating traffic, bounce rate, ads and campaign efficiency metrics and real-profile based market segmentation to guide your marketing and sales activities.

Content Adjustments

Real-time adjustments of the positioning, display, size, font and color of the content in order to be better suited for the current user by using simple JavaScript techniques (altering CSS attributes, visibility and display).

Long term adjustments to make the site more relevant for the majority of visitors or, if needed, for the targeted segments that have a high bounce rate at the moment.

Campaign Adjustments

Run your live, real-time campaigns on your site for the corresponding personality, gender and age group of the live visitors.

Adjust your marketing campaigns (advertising, commercials, PPC, email etc.) to suit the majority of visitors or, if needed, to target segments that have a high bounce rate at the moment.

De

Deep Segmentation

Display only relevant content to the current visitors based on their personality, gender and age group in order to increase interest and conversion rates. For example, display "Men Shoes Discount" ads only to men.

Relevant Metrics

Gain access to unprecedented metrics and statistical data. Not only understand the personality, gender and age group of clients that use your site but also the profile of the people that leave the site. Use these metrics to follow customer trends, campaign and ad success vs bounce rates and other statistics to help grow your conversion rates.



Content Adjustment Sample



Roll over image to zoom in

Lenovo Flex 14 2-in-1 Convertible Laptop, 14 Inch FHD Touchscreen Display, AMD Ryzen 5 3500U Processor, 12GB DDR4 RAM, 256GB NVMe SSD, Windows 10, 81SS000DUS, Black, Pen Included

by Lenovo

★★★☆☆ ✓ 42 customer reviews | 109 answered questions for "lenovo" between \$400 and \$700

List Price: \$579.99 Price: \$549.99 You Save: \$30.00 (5%)

Free tech support included 🐱

Capacity: 14.0"

- With a 1920 x 1080 Full HD touch screen Display and the powerful and efficient AMD Ryzen 5 3500U mobile Processor, you can work, stream, and game for hours, along with Radeon Vega 8 for fast video and photo editing. Includes HDMI, USB-C, and USB 3.1 inputs
- Comprehensive, built-in, ongoing protection with Windows 10 helps protect you against viruses, malware, and ransomware
- Convenient true block privacy shutter allows you to physically close your PC's webcam whenever you're not using it
- With the included active Pen, you can draw or take notes directly on the screen, anywhere you go
- Up to 10 hours of battery life with recharge Technology to power your laptop computer up to 80% in just one hour
- > See more product details
- Compare with similar items New (4) from \$549.99 Details

Normal Product View

This product page is close to a standard in the e-commerce industry. It contains the normal elements: images, videos, product name, product price, discounts, features, comparison link and other sellers link. The general approach is to use UX and A/B testing to make the page content as efficient and friendly as possible for, what the company considers, the majority of users.

This inherently implies that the content and element disposition is not suitable, likable, efficient or advantageous for all types of users. Several studies have discovered some tips and tricks to make the web pages easier to use:

- Valuable content accessible in the first half of the screen, without requiring scroll. This is because people tend to lose interest if the first paragraphs they read are not relevant for them.
- Call to action at the end of content. People should go through the content. If they have enough interest to go through all the content, they are suitable for a call to action (share, upload, see ads etc.)
- Headlines and points of interest should be bold as most people don't have the patience to read everything.
- Limit the amount of information displayed in a single paragraph. On the web, most people read better in chunks.
- White spaces and empty space make the page not seem crowded or too complex. Most people accept scrolling if the page is clean and has enough spaces where the eyes can rest. Most people do not like banners.
- Pictures of people are always good, for most people.





Roll over image to zoom in

Content Adjustment Sample

Highly Popular Lenovo Flex 14 2-in-1 Convertible Laptop, 14 Inch FHD Touchscreen Display.Ideal for Social Media.

★★★★☆ ✓ 42 customer reviews | 109 answered questions

Seller Choice for "lenovo" between \$400 and \$700

List Price: \$579.99 Price: \$549.99 You Save: \$30.00 (5%)

Free Amazon tech support included 👻

Capacity: 14.0"

- Comprehensive, built-in, ongoing protection with Windows 10 helps protect you against viruses, malware, and ransomware
- With the included active Pen, you can draw or take notes directly on the screen, anywhere you go
- Up to 10 hours of battery life with recharge Technology to power your laptop computer up to 80% in just one hour

> See more product details



★★★☆☆ Refurbished August 24, 2019

Capacity: 14.0" Verified Purchase

I received this computer on Thursday, marked brand new. 20 minutes after setting up part of my screen glitched up and became pixelated. I gave it a little while and it was fine even though it did it again at other times. Tinkering around, I opened up the drawing pad only to discover there was a drawing already in there. Not a professional demo one, just something someone drew. I called up Amazon and asked if this was refurbished, they said no. I described the issues and they were nice and courteous and are sending out a replacement immediately. Until I receive a brand new one as promised, I will leave my review at 3 stars. It is a great computer, but this issue was a bit of a let down. Make sure you check your products before the 30 day mark expires.

41 people found this helpful

Product View for a Agreeable Personality Type

Agreeableness is defined by trust, empathy, interest in others and conformity. The content in the above image adjusted to a suitable alternative for an agreeable person:

- Less images of the product but more videos, preferably showing people praising the product (to appeal to conformity and overall interest in others)
- Title includes social benefits
- Features are limited to most relevant ones (implying protection in other networks, interaction with people and battery autonomy to avoid unpleasant situations)
- Positive reviews immediately follow the feature list (this helps the person see that the product is appreciated by other; they can read other people's opinions; this appeals to their conformity and interest in others.)



Content Adjustment Sample



Product View for a Conscientious Personality Type

Consciousness dimension of Big Five is mainly characterized by: efficiency, attention to details, perceived optimal decision making (wants to be sure they made the most beneficial choice). Taking this into account, the above image adjusted from the original product page to:

- Less images, keeping only the relevant angles (looking at too many pictures is considered a waste of time; a few are enough to ensure expectations)
- Name has been simplified for readability and search-ability (allows for pronounceable, searchable names; easier to validate optimal purchase)
- Described features (consisting of text) have been replaced by technical features (only relevant details are displayed; artistic or marketing like description are tiresome and impractical)
- Product and price comparison have been added after the feature list (validates and ensures the best decision can be taken both in terms of prices and features making the process efficient)



Content Adjustment Sample

< Back to results



Lenovo Flex 14 2-in-1 Convertible Laptop, Windows 10, Black, Pen Included

★★★★☆ ~ 42 customer reviews | 109 answered questions Seller Choice for "lenovo" between \$400 and \$700

List Price: \$579.99 Price: **\$549.99** You Save: **\$30.00 (5%)**

Free tech support included 👻

You may return this product for a full refund within 30 days of purchase. $\,\, imes\,$

Capacity: 14.0"

- 1920 x 1080 Full HD touch screen Display, AMD Ryzen 5 3500U mobile Processor. Efficient and resilient for work, streaming, gaming for hours and fast video and photo editing.
- Comprehensive, built-in, ongoing protection with Windows 10 helps protect you against viruses, malware, and ransomware
- Convenient true block privacy shutter allows you to physically close your PC's webcam whenever you're not using it
- Up to 10 hours of battery life with recharge Technology to power your laptop computer up to 80% in just one hour
- > See more product details

Compare with similar items

Roll over image to zoom in

Product View for a Neurotic Personality Type

Neuroticism is described by: fear, anxiety, insecurity, need for guidance and external decision making. The content has been adjusted as follows:

- Limited pictures (excluding those that show the product as being too thin, thus more fragile)
- Title has been simplified but still contains all bonus features (easier to read, no confusing terms which increase insecurity and anxiety)
- Number of reviews and open questions have been made bold and with increase font size (they provide a guarantee that other people consider this a good purchase)
- Money back guarantee notice and explanations have been added in page (ensures that if the person makes a mistake, they get their money back, no worries)
- Savings have been made bold and increased in font size (points out the direct benefit; this purchase is advantageous)
- Features have been simplified to make it easier to read and avoid misunderstandings. (avoid misinterpretation; limits the amount of information on page; more white spaces for eyes to rest)



Determine what campaigns, products, strategies, ads and content address customers by their biological gender.

Track customer behavior, especially in scenarios when a low probability of purchase increases, to determine what you did to improve the visitors experience.



Gain insight on how different age groups behave on your website.

Gain unique insight in the personality of your customers. See what categories convert in which ones bounce in order to improve your business.

Market Segmentation

MEASURABLE. Identify segmentation variables that are related to purchase of the product and develop a descriptive profile of the market segment using a combination of variables.

ACCESSIBLE. Determine how to reach market segments in an efficient and cost-effective manner.

SUBSTANTIAL. Segment the market based on substantial, relevant criteria, in order to efficiently address each targeted segment.

ACTIONABLE. Gain insight on how each segment behaves in response to your product, offers, campaigns and ads.

Deep Segmentation

Enhance external targeted marketing campaigns by adding the personality dimension and integrating it with your Ads.

Deeper understanding of external marketing efforts. New "WHYs" leading to new "HOW TOs".

Cross promotion optimization and purchase rate enhancement by deep analyzing and further understanding of your audience.

Provides a brand new and unique point of view for marketing and analytics by dividing the visitors into 5 new categories using a unique, non-invasive, proven, scientific method.





Marketing ROI

To maintain the trust of peers, marketers must confidently hold the reigns when it comes to tracking their return on investment. You do not want to be surprised by dwindling ROI data, and then put on the spot to explain it. Marketers must understand which investments drive the greatest profit margins, and how their performance is trending over time.

Ads and E-commerce Metrics

Research conducted by Larry Kim provides conversion rate benchmarks for businesses who advertise on Google AdWords. Note, these conversion rate benchmarks reflect the overall conversion rate for an advertiser, not the performance for a single ad or landing page.

- Average Google AdWords account: 2.45 percent conversion rate
- **Top 25th** percentile of AdWords accounts: **5.31** percent conversion rate
- Top 10th percentile of AdWords accounts: 11.45 percent conversion rate

The <u>Monetate E-commerce Benchmark Report</u> tracks key e-commerce metrics based on an analysis of their customer data. The most recent Monetate report shows that:

- Among known marketing channels, the average e-commerce order value is highest from direct traffic, followed by search traffic and email marketing. The average order value is lowest from social media.
- The average add-to-cart conversion rate is 8.59 percent in the United States and 8.82 percent globally.

"What Is Good ROI for Your Marketing Campaigns?" www.trackmaven.com



Ads Adjustment Sample



Extrovert Enjoys the company of others Sports as a mean to socialize Enjoys group activities Comfortable in public



Conscientious Preoccupied with self-development More interested in personal growth Less interest in group activities Results are more important than fun Invest in a personal coach



Extrovert/Open Favors outdoor activities Is comfortable and secure in nature Experience is important Favors travel



Introvert Favors indoor activities Feels uneasy and exposed in nature Comfort is important Tries to avoid being judged or analyzed by others





Custom Marketing

A type of marketing method whereby an advertiser tries to customize the message to the unique needs of a specific customer or specific subset of customers. Custom marketing is usually targeted toward a high net worth niche.

Targeted Ads

Traditional marketing, requires the selection of the most favorable target group and creating campaigns suitable for those demographics. In an effort to address categories which have little or no commonalities, campaign tends to be overly generic (and thus with a limited effect) or really specific, alienating part of the potential clients.

For example "Coca-Cola focuses on family fun and simplicity, and Red Bull focuses on younger males through digital marketing."

"Global Marketing Strategies: Coca-Cola vs. Red Bull" https://sites.utexas.edu

Adamant Links prediction allow for the same product, to target all demographics to specific campaigns displayed for each segment accordingly, without any additional effort.

Custom marketing, in the traditional sense, implies the discovery of niche group of high net worth that may also be interested in the product. With Adamant Link this is no longer the case, any segment, not considered the main segment can also be addressed.



Personality Metrics Example



Marketing Metrics

In a constantly and rapidly changing business landscape, the need to measure digital marketing success as efficiently as possible has increased in importance more than ever before. Every digital marketing tool available has some means of measuring success made available through the various metrics business owners can obtain.

Campaign Adjustments

In the above image, we can see the metrics for clicks for a specific ad presented on the site, and the distribution of the click rate for each major trait of the "Big Five" model. These metrics show that the ad has been clicked by Open and Agreeable people, less by Conscious and Extrovert people and almost not at all by Neurotic people.

In order to address the Neurotic group, a new type of ad needs to be developed with the attributes favored by people high in neuroticism and displayed to the specific group when they visit the site

In this manner the groups that already respond well to the add are not affected, while the group that avoided the add can now be targeted in an efficient way.



Implementation



Normal Site Usage

In essence the script does not alter the behavior of the site, it just attaches some observers to the site elements that we want to track. Significance and intent associated with the tracked elements need to be validated by Adamant Links and should not be changed by client as it may change the behavior of the application.

JavaScript Tracking

A tracking Java Script file is placed on the client website to collect navigation and usage data. The script will be developed by Adamant Links to prevent any errors in implementation and understanding, and will be reviewed by the client's development team.

REST API Integration

Collected data is sent via an AJAX request to the Adamant Links REST services.

Behavior and data are analyzed and predictions are made in milliseconds.

Prediction data can also be saved in a dashboard application, hosted in a client specific environment.

Prediction Results

Results are received by the JavaScript that made the AJAX call and can be immediately used within the website for the following:

> Adjust Content Personalize Content Display Relevant Ads

Current Features



Future Development







PERSONALITY (OCEAN), GENDER, AGE AND PURCHASE PROBABILITY PREDICTIONS THROUGH SOFT BIO-METRICS

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