VISTAPRINT - Everything You Create Matters

Summary	In this assignment, you are given a company to evaluate and understand how programmatic services are integrated into applications.
URL	https://www.vistaprint.com/
Category	Web

What is the product?
- Product line includes
- How does it work?

How are they selling it?
- Online Website
- Mobile Application

How is it priced?
- Dynamic Pricing
- Bundling
- Supply & Demand Pricing
- Psychological Pricing
- Promotional Pricing
- Corporate Pricing

What promotions are they using?
- Bundling Discounts
- Recommendations
- Monthly Deals & Promo codes

What algorithmic marketing services are they using?
- Advertising
- Promotions
- Search
- Recommendations & Pricing

What datasets do you think you will need to build these algorithmic services?
- How frequently will data change?
- How would you store these datasets?

Review the jobs/career site and search for Data/ Data science positions,what technologies and programmatic services is the company using?

Domains and Positions available
How Technologies & Programmatic Services

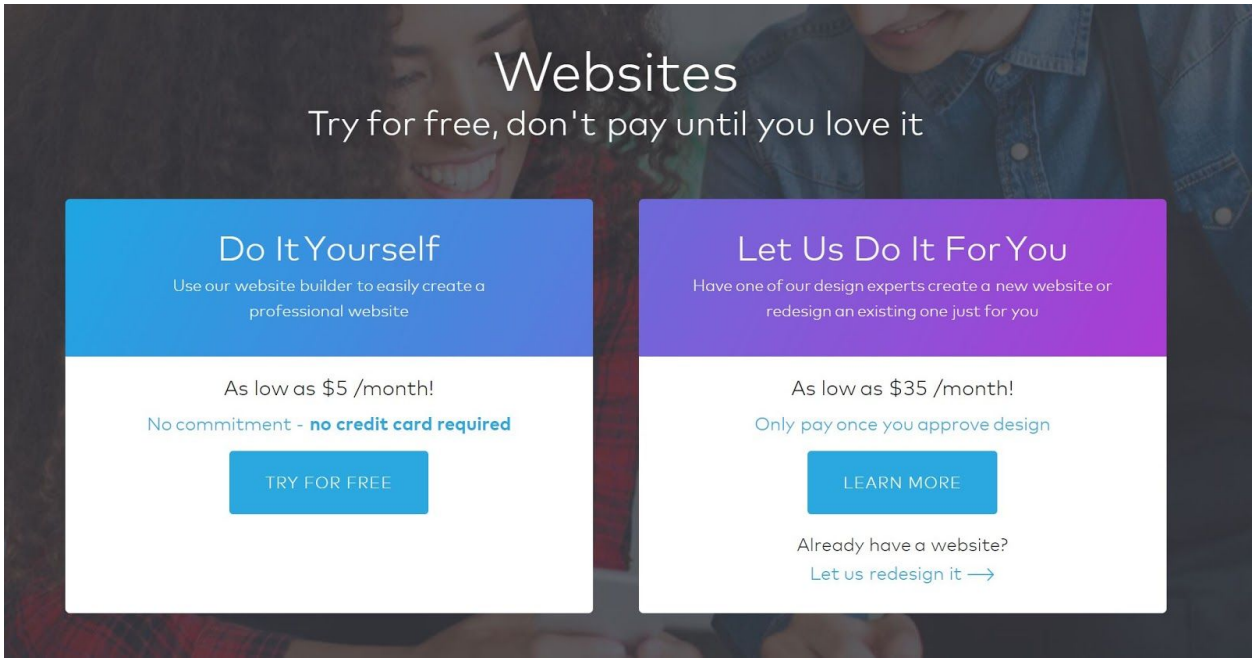
How is the company tracking visitors?

What is the product?

Vistaprint is a Dutch global e-commerce brand that produces physical & digital marketing products for micro businesses.

Product line includes :

Business Cards	Marketing Materials	Signage & Trade Shows
• Premium Shapes • Brilliant Finishes • Premium Papers	• Advertising • Office Supplies • Packaging	• Banners • Posters • Car Signs
Photo Gifts	**Invitations & Stationary**	**Clothing & Bags**
• Mugs • Calendars • Holiday Cards	• Wedding • Graduation • Birthday	• T-shirts • Sweatshirts • Jackets



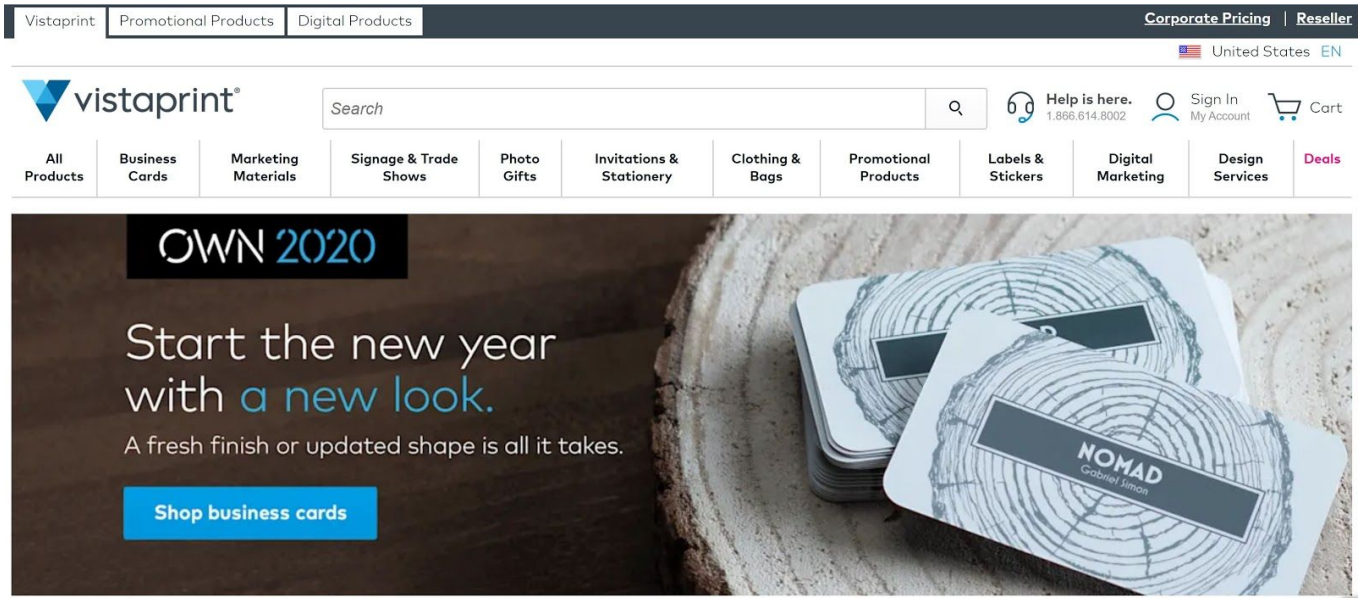
How does it work?

- Orders are processed online and jobs are gang printed.
- The jobs are dependent on the formula based on
    a. Type of job
    b. Paper stock type
    c. Print run quantity
- Within each category, only specific sizes, paper stocks and ink colours are supported.
- Resulting in higher numbers of similar jobs which can be ganged together.

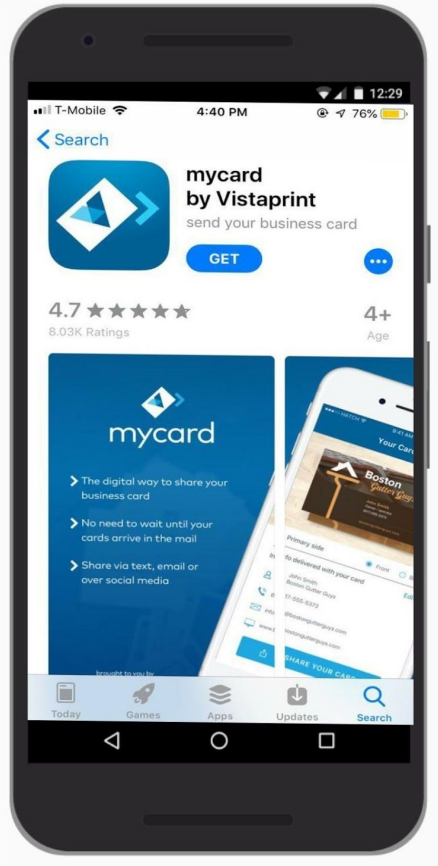
How are they selling it?

Online Website

Vistaprint sells their products through its online website - https://www.vistaprint.com/



Mobile Application



How is it priced?

Dynamic Pricing:

Changing the price of a product based on customer segments or market conditions.

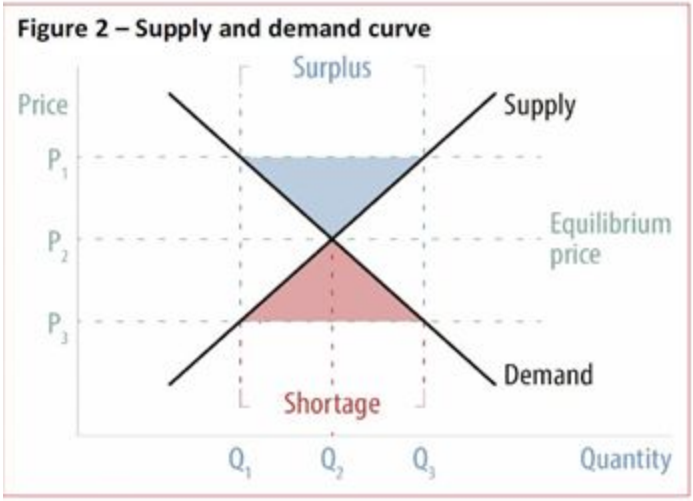
Bundling:

Bundling helps to increase efficiencies, thus reducing marketing and distribution costs. It allows the consumer to look at one single source that offers several solutions.

Quantity	Price per piece	Price
○ 100	$0.40	$40.00
○ 250	$0.18	$45.00
◉ **500**	**$0.10**	**$50.00**

Supply and Demand Pricing:

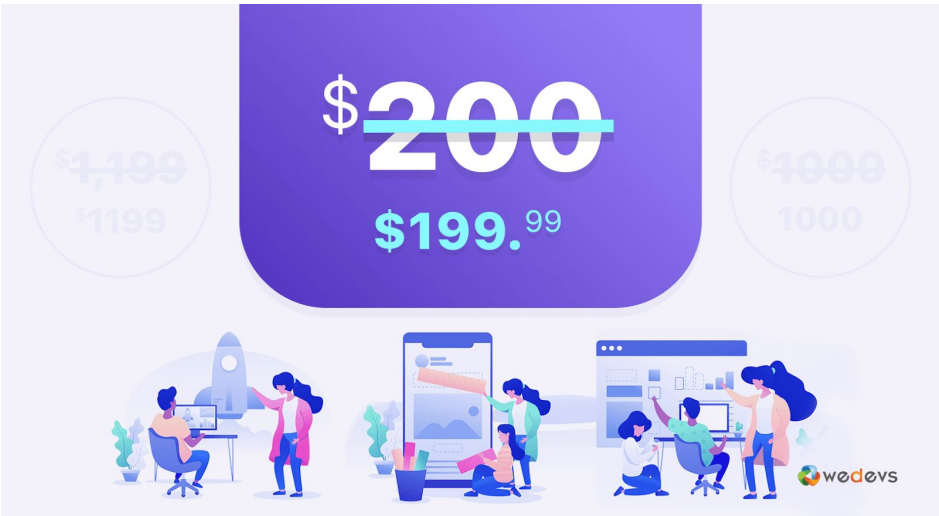
Relationship between the quantity of a commodity that producers wish to sell at various prices and the quantity that consumers wish to buy.



Supply and demand curve

Psychological pricing:

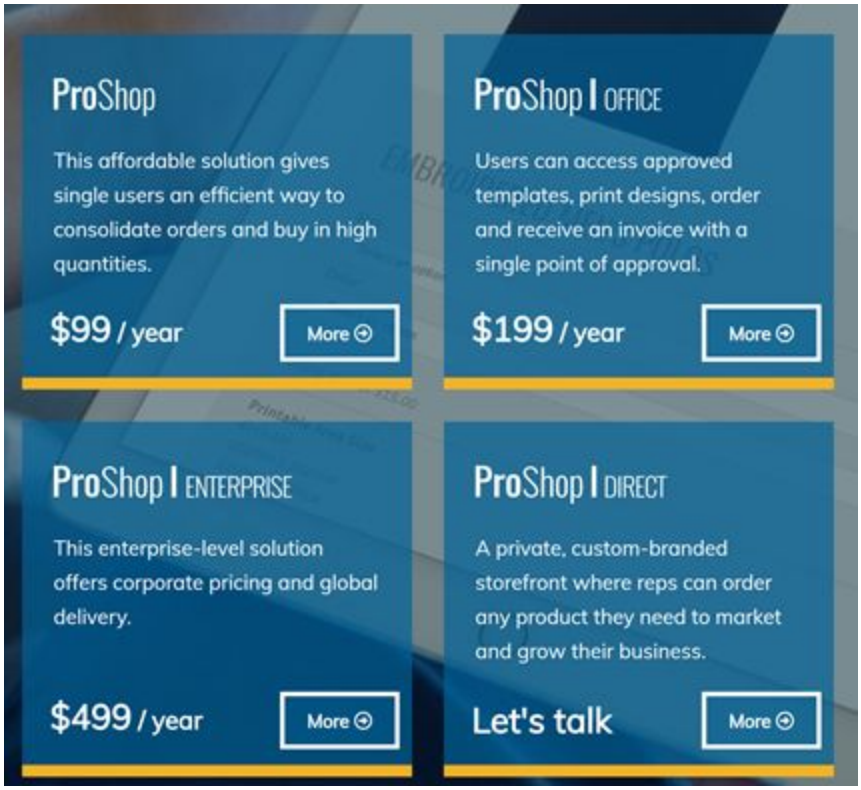
Psychological pricing is the act of pricing your product so that it appeals to customers' motions rather than their logic.



Promotional Pricing:

It is a short term effort to provide your customers with vouchers or coupons that entitle them to a certain percentage off the good or service

Corporate Pricing:



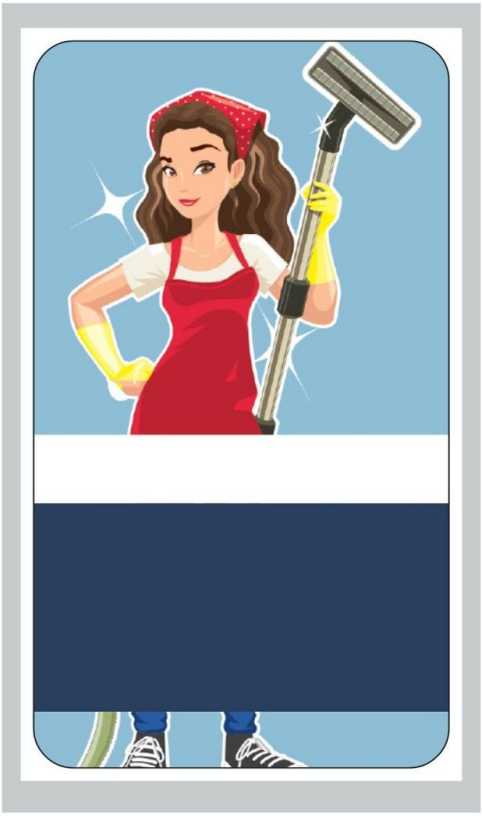
What promotions are they using?

Bundling Discounts

In this they sell a package or set of goods or services for a lower price than they would charge if the customer bought all of them separately.

Home / Select quantity

Please review your quantity



Paper Stock

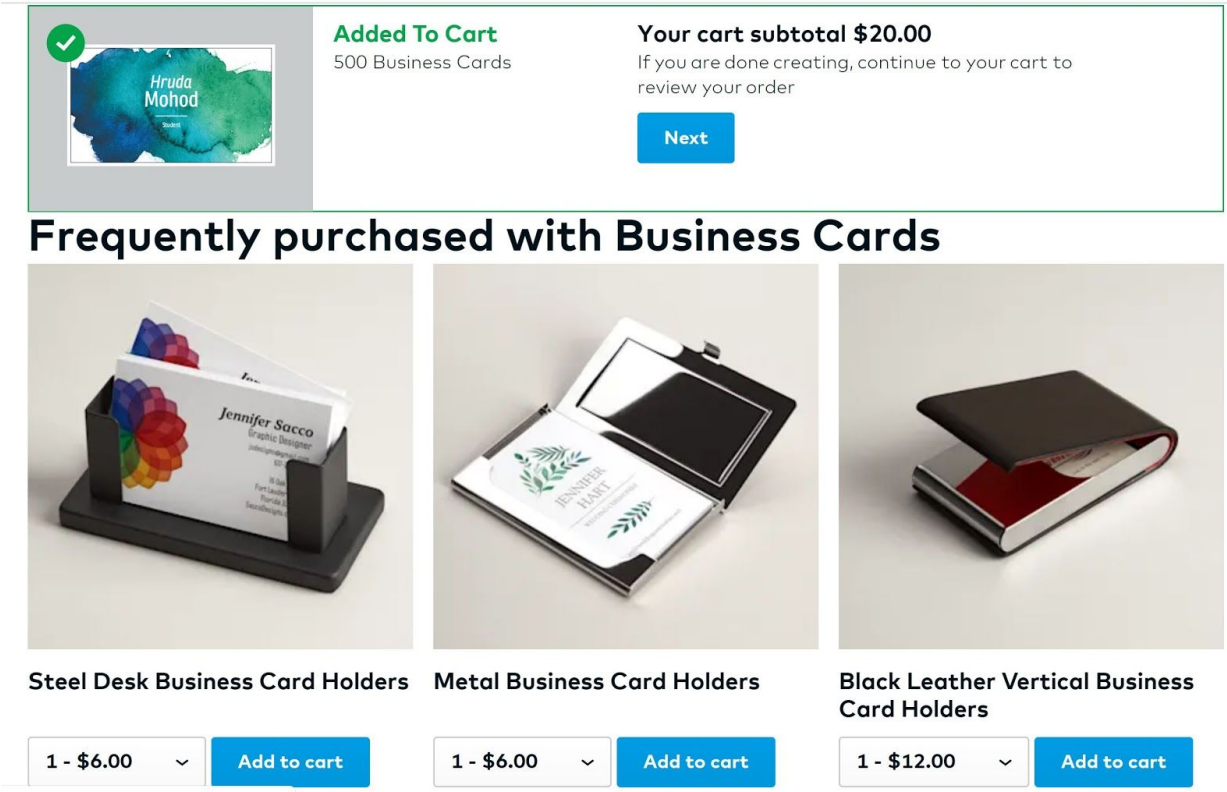
See how your value adds up. The more you order, the lower your cost per piece and the more customers you can reach.

Quantity	Price per piece	Price
100	$0.40	$40.00
250	$0.18	$45.00
500	**$0.10**	**$50.00**
1000	$0.09	$87.00
1500	$0.09	$127.50
2000	$0.08	$166.50
2500	$0.08	$203.50
5000	$0.07	$372.50
10000	$0.07	$722.50

Approve & Add to Cart

Recommendations

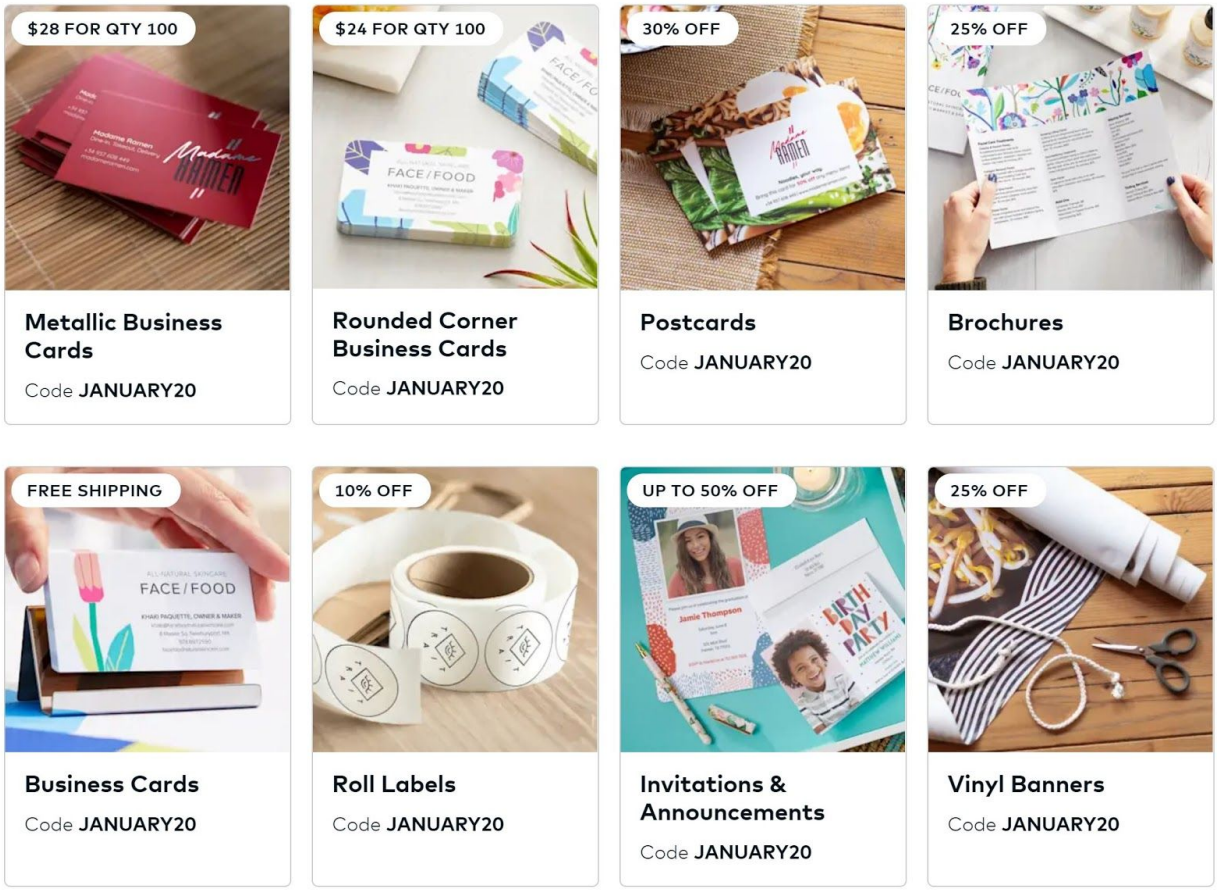
In this they suggest the consumer to buy products that are similar or usually purchased together.



Monthly Deal & Promo Codes

The discount associated with a promo code can apply to individual products or an entire order.

Vistaprint Promo Codes



What algorithmic marketing services are they using?

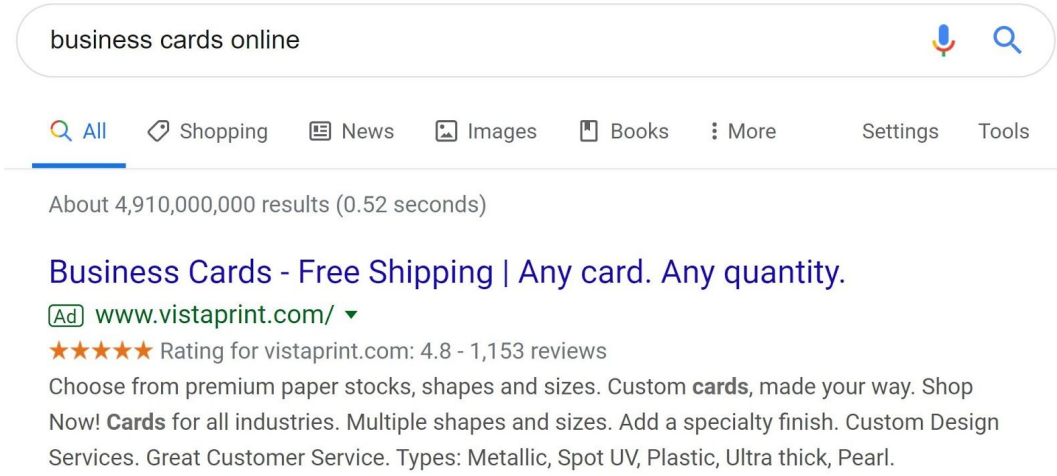
Advertising

Advertising is a marketing communication to build a brand image, sell a product, service or an idea. Advertising is done for long term goals to build a brand image for a company and its product line, so they can promote their products and generate revenue.

- TV Advertisements, Integrated Content Marketing, Sponsored Ads, Google Ad words, SEO
- Guest blogging, social media activity, influencer marketing, and brand mentions

https://www.youtube.com/watch?v=eYrBFcpiluI

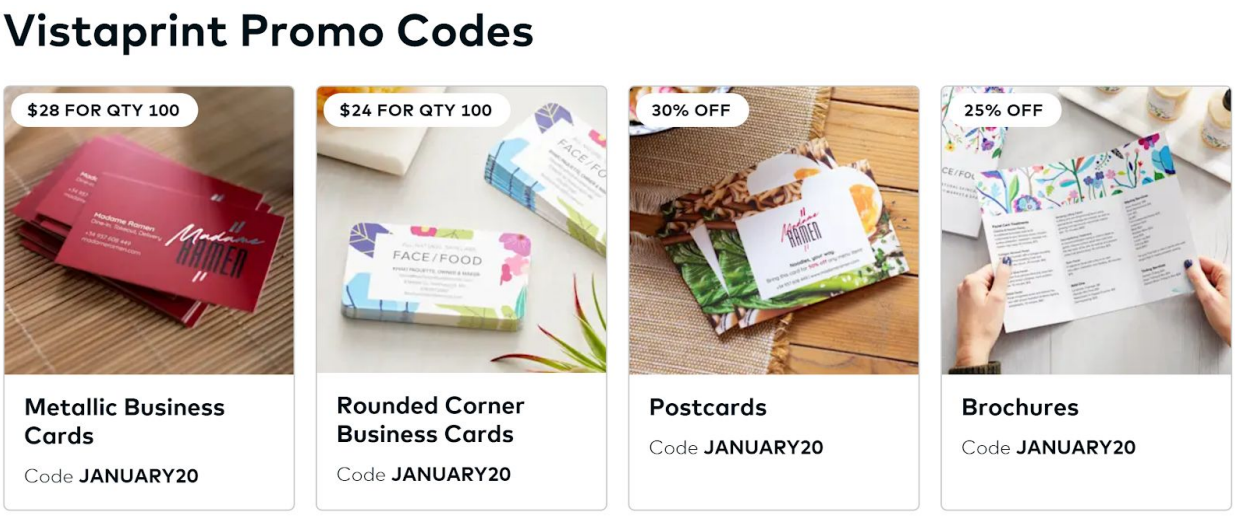
https://www.youtube.com/watch?v=PXPyIv2WLdI



Promotions

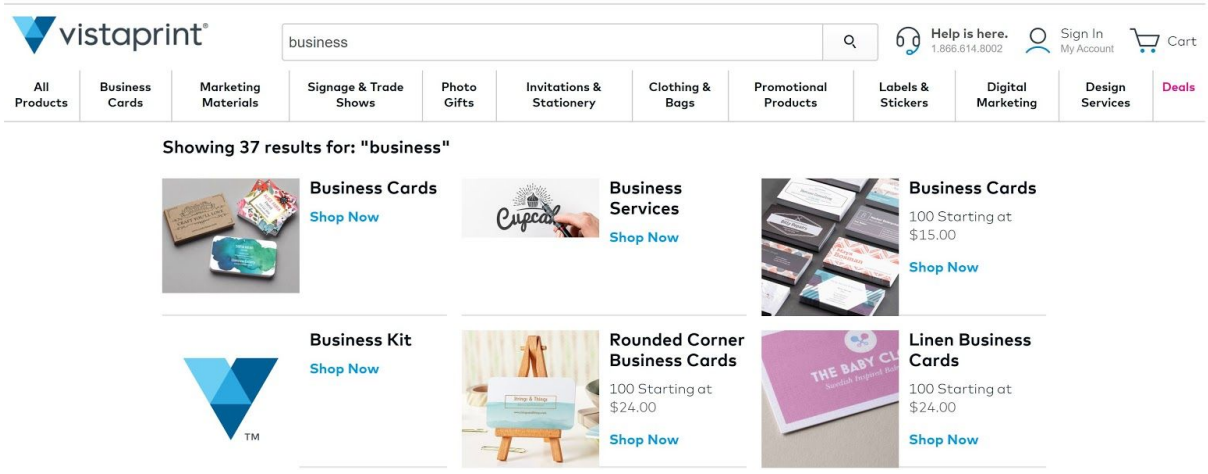
Promotion is the variable of the marketing mix. It is used to push short-term sales.

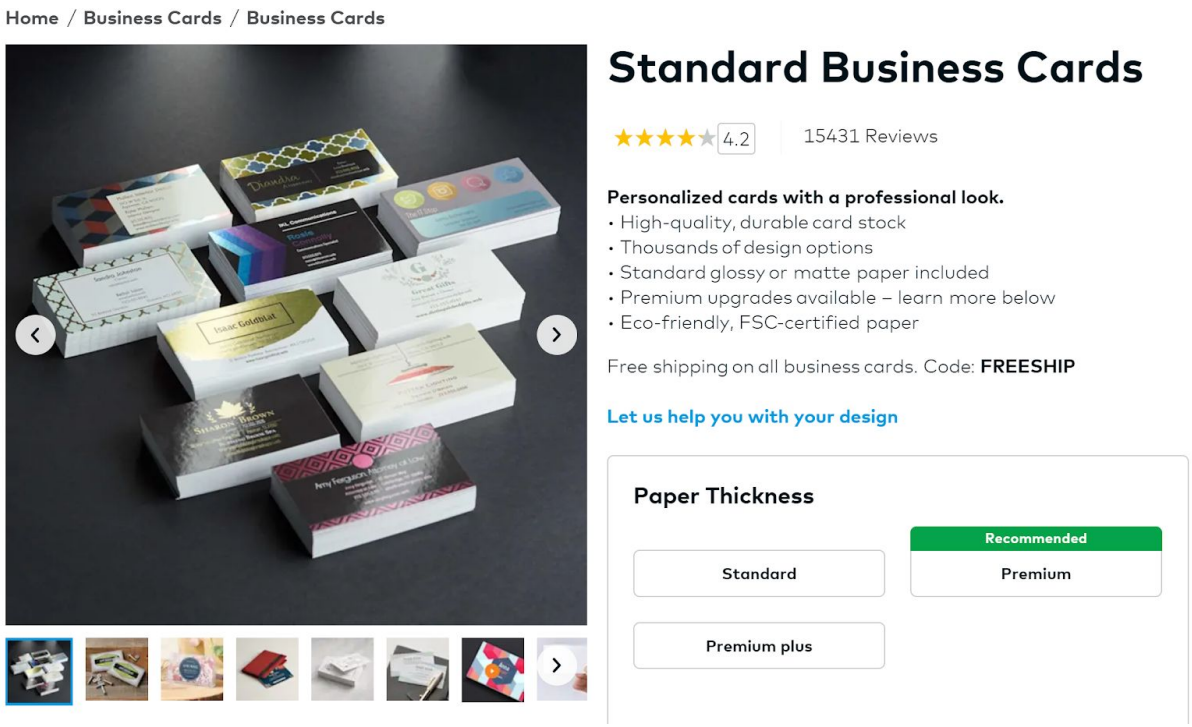
Types of Promotions include - Monthly Deals, Bundling discounts, Promo Codes



Search & Recommendations

Users can locate content by searching for specific words or phrases, without needing to understand or navigate through the structure of the Web site.





Pricing

What datasets do you think you will need to build these algorithmic services?

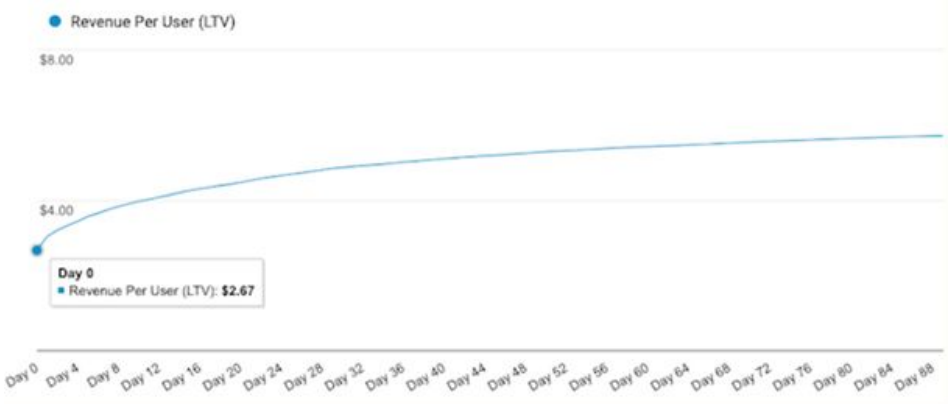
Dynamic datasets are needed for the algorithmic services to be used efficiently. We can see better and act faster by consistently monitoring dynamic data streams.

Broad Domains:

Product Monitoring	Customer Experience Management	Dynamic Remarketing using Google Analytics
Product information, like pricing, description, customer reviews, image. Datasets for Supply chain analytics to forecast the demand and handle warehouse storage, logistics and delivery.	This is important in order to provide a more personalized experience. For example, Extracting can help decipher how customers are feeling about the product by analyzing the positive and negative feedbacks	It lets us show remarketing ads for content or products that are most likely to interest users based on the content or products they viewed earlier on our site, related & top-performing products, as well as their purchase histories and demographics.

LTV data for Revenue Generation

LTV datasets are required for forecasting the Revenue per customer and to understand the long term value of your marketing channels



SPECIFIC TO MARKETING MIX

- **Advertising & Promotions**

  Promotional Campaign data which includes features like items sold per minute, tracking number of impressions/clicks during a promotional campaign, conversion statistics of various forms of promotions (for instance, Email promotions, Ad words, bundling discounts) combined with historical purchase data of customers to figure out which bundling promotions they are most likely to buy.

- **Search & Recommendations**

  User behavior reports and Google Search Console traffic datasets can be used. User behavior reports, for instance, show you how people behave once they land on your site, while Google Search Console data tracks key metrics, such as number of sessions, number of unique sessions, bounce rate, and more.

- **Call to Action (CTA)**

  Words could be used for Search Engine optimization.

- **Pricing & Assortment**

  Dynamic pricing system that crawl the web and create a periodic pricing dataset for similar products based on how the competitor companies are pricing it. These systems alter prices dynamically based on a lot of factors including the supply and demand.

  We would need data regarding production & operational costs for each product category in order to build a strategic Pricing system considering how much margin we should keep, to generate profits across all verticals. Once the initial prices are determined for products, they should be updated using dynamic pricing based on supply/demand, promotional offers, prices of similar products by competitors, seasonal discounts, revenue targets, clearance sales etc.

How frequently will data change?

These datasets are dynamic and constantly changing. But in the context of Predictive Analytics, nature of the data will decide whether we need to update it daily, periodically or only a one-time activity and then retrain our predictive models using Transfer Learning or personalize the website for Search & Recommendations periodically.

How would you store these datasets?

Apache Hadoop

It is a java based free software framework that can effectively store large amount of data in a cluster. Hadoop Distributed File System (HDFS) is the storage system of Hadoop which splits big data and distribute across many nodes in a cluster.

Microsoft HDInsight

It is a Big Data solution from Microsoft powered by Apache Hadoop which is available as a service in the cloud. HDInsight uses Windows Azure Blob storage as the default file system. This also provides high availability with low cost.

PostgreSQL

It is a free & open-source relational database management system (RDBMS) emphasizing extensibility and techn ical standards compliance. It is designed to handle a range of workloads, from single machines to data warehouses or Web services with many concurrent users.

PolyBase

This works on top of SQL Server 2012 Parallel Data Warehouse (PDW) and is used to access data stored in PDW. PDW is a datawarhousing appliance built for processing any volume of relational data and provides an integration with Hadoop allowing us to access non-relational data as well.

Presto

Facebook has developed and recently open-sourced its Query engine (SQL-on-Hadoop) named Presto which is built to handle petabytes of data

Bulk Apex/SOQL

Salesforce platform to efficiently query large data sets and reduce the number of API requests. A bulk query can retrieve up to 15 GB of data, divided into 15 1-GB files. The data formats supported are CSV, XML, and JSON.

Progressive Loading/Dataflow

Data can be programmed to be loaded in batches; this is a big data feature to avoid overloading the memory of the tool to execute commands

Redshift

It is a fully managed, cloud-based, petabyte-scale data warehouse service by Amazon Web Services (AWS). It is an efficient solution to collect and store all your data

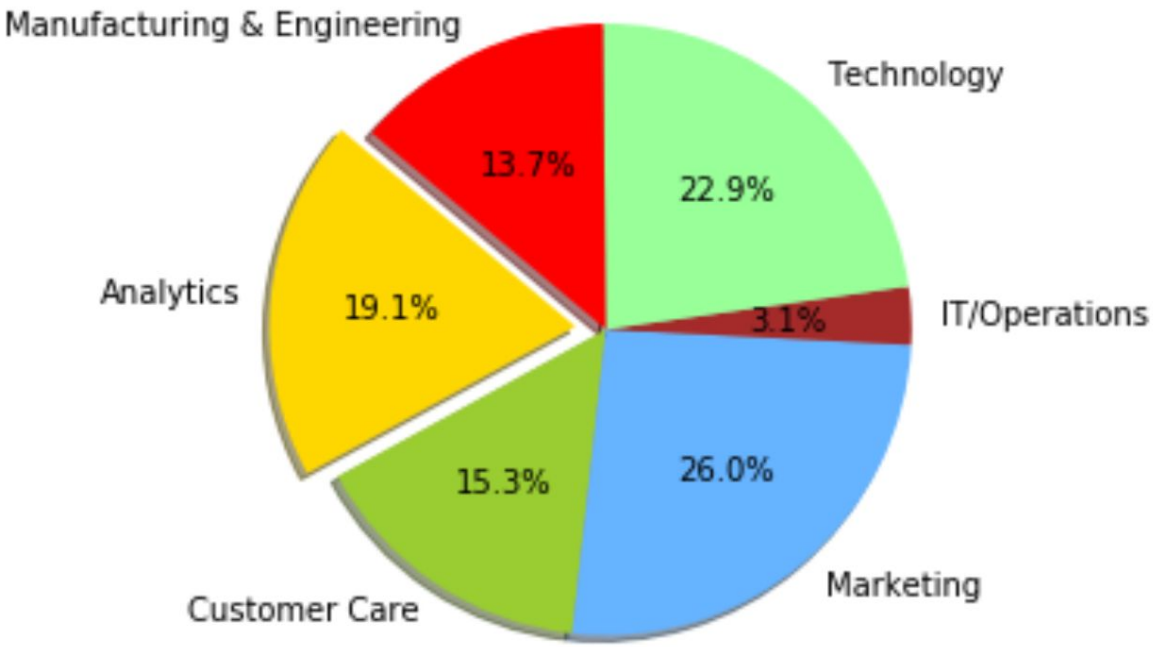
Hive

This is a distributed data management for Hadoop. This supports SQL-like query option HiveSQL (HSQL) to access big data.

Review the jobs/career site and search for Data/ Data science positions, What technologies and programmatic services is the company using?

Just to give you an idea - VistaPrint is hiring around 50 Data Scientists in the next 1 year.

Domains & Positions Available



Analytics

Principal Data Scientist, Data Science Chapter Lead, Senior Research Analyst, Senior Pricing Specialist, Pricing Strategy Manager

Digital Marketing

Email Marketing Specialist, Content SEO Specialist, Product Marketing Specialist, Data Product Owner, Senior eCommerce Merchandising Specialist

Technology

Software Engineer, DevOps Engineer- CI/CD, Web Analytics Manager, Pricing Strategy Manager, Senior Front-End Engineer, Operational Support Engineer

Technologies & Programmatic Services

Data Science

Recommendation Systems, Price Optimizations, Time Series Modeling, Customer LTV, Propensity Modeling, Image Recognition, Programmatic Advertising, Attribution Modeling, Segmentation, cohort analysis

Tech Stack - Python, R, Spark, Java, Scala, Bayesian Statistics, Tensorflow, PyMC3, SPSS, MarketSight, Tableau or Looker, Qualtrics, Google Analytics, Adobe (Omniture), Hotjar, CrazyEgg, A/B testing

Marketing

Marketing Automation, Hypothesis testing, A/B & Multivariate Testing,

Tools - Adobe Campaign, Responsys, Exact Target, Google Search Console, SEO

Software & Technology

JavaScript, Java, Angular.js, React, Vue, Jenkins, GitLab, Docker, Kubernetes, Amazon AWS, CI/CD Pipelines, SQL, ETL, Looker

How is the company tracking visitors?

They use website tracking for gathering information about the users, their digital activity or journey between websites. They use the below tools & techniques for tracking visitors

Advertising Cookies
Third party cookies for Targeted advertisement.

Analytics Cookies
Cookies to track and log visitor behavior to gain insights

Web beacons & Tracking Pixels
Web beacons are used to monitor the activity of users at a website for the purpose of web analytics.
Tag placed in an email for Email Marketing, which provides information if and when the user opens the email and how they interact with the content

Dynamic Remarketing
Google Analytics track visitor behavior on our websites, their purchase histories, demographics to show targeted ads when they visit other sites for products they viewed earlier on our website

We can segment users into few categories to target for Remarketing based on the data associated with them

- Product Searchers – Users who viewed any of your search-results page.
- Conversion Abandoners – Users who viewed their shopping carts but didn't confirmed the purchase.
- Product Viewers – Users who viewed any of your product lists.

Tools used for Tracking

Analytics Platforms including Google Analytics, Google Remarketing, Adobe Analytics (Omniture), Optimizely, VWO, SiteSpect, AB Tasty

Below are some of the information these tools might track -

- The sites the user visits
- The frequency of a user's returning visits to a site
- What the user clicks on
- How long the user lingers on a site
- The speed with which the user scrolls
- Where the user stops
- The movements of the mouse around a webpage

- The reviews a user might add