



An analytics platform that helps brick-and-mortar retailers run tests to optimize store operations.

Information Deck*

Pennvention Round 1

*We have a visual deck for presentation purposes

Confidential

Yash Kothari, co-founder
Pranshu Maheshwari, co-founder

The Prayas Solution

Prayas Analytics is an analytics solution that helps brick-and-mortar retailers run tests and optimize in-store operations. The company quantifies the in-store customer experience in a way that has never been done in the brick-and-mortar world before. The metrics that Prayas collects include, but are not limited to, queue length, speed of service, and customer abandonment. Operations teams at large retailers can use this information to optimize labor costs, evaluate staff performance, A/B test, and derive operational improvements more generally. Furthermore, this data is collected by leveraging our clients' surveillance video footage and our cloud based software suite, creating a seamless solution that requires no hardware installation inside the stores.

The need for offline retail analytics is clear. Physical retailers today have trouble competing with e-commerce due to the massive amounts of data that online retailers have about their customers. Companies like Amazon rely heavily on such data to tailor their offering for each customer. While e-commerce companies continue to enhance the customer experience, brick and mortar retailers are still using “hunches” or limited loyalty card information to make decisions on marketing spending and operational efficiency in their stores. Prayas Analytics aims to solve the lack of access to data for these retailers. The target customer is an operations-team at a large (200+ stores) omni-channel retailer with an estimated market size of over \$2.8 billion (derived using average analytics spend numbers across large retailers).

The Tech Backend

Our product is a cloud-hosted, proprietary Software-as-a-Service (SaaS) offering that analyzes in-store surveillance footage to extract customer and employee behavioral data. Our product will be focused on analyzing behavior around the cash register region because most retailers already have cameras installed in that area. Thus, our product offers an elegant solution that leverages existing infrastructure in the form of existing surveillance footage.

Step-By-Step Service Offering

1. Collection: Surveillance footage is collected from clients two ways. Our product can directly connect to the client's IP connected cameras or clients can upload footage to the cloud through our web platform.
2. Observation: Software will translate the footage into raw data regarding customer movement. The backend of the software is written in Python and utilizes various open source ComputerVision libraries. The core technology involves tracking changes in pixels between images and identifying these changes as certain behaviors. For example, a basic execution of this involves focusing on the queue and tracking the number of "blobs" (people) and how quickly they move. This is then time stamped by using the video clip's frame rate. This software is being developed internally and we are implementing algorithms that track certain behaviors unique to the Prayas solution (i.e. customer browse rates).
3. Analysis: Raw data will be processed into metrics via custom statistical probability models and machine learning. These models will help drive more advanced analytics such as smarter labor modeling or potential sales lost due to queue abandonment.
4. Delivery: Raw data and processed metrics will be accessible to retailers through a web dashboard that is intuitive and easy for the retailer to organize and understand.

The Competition

There are many companies in the retail analytics space that can be divided into two main categories: surveillance video analytics companies and wifi/cellular tracking analytics companies. Companies in the first space leverage surveillance video as well as custom in-store sensors to collect retail analytics for their clients. Some of the most well-known companies in this category include RetailNext, Prism Skylabs, and Scopix Video Solutions. Companies in the second segment, such as Nomi and Euclid Analytics, leverage wifi enabled cellular devices to collect relevant store metrics. Although these companies both have a good amount of traction and are well-funded, they face a high chance of inaccuracies and lost data given their reliance on wifi; not every person entering a store has a smartphone, and not every smartphone user has wifi enabled.

Overall, our competitive advantage comes down to three main value-adds: the first being seamlessness and ease of use of our solution. By relying solely on surveillance video for our analytics, we require no installation costs or time to set-up in new stores and therefore are able to scale seamlessly. Secondly, we are building a company that is easy to scale. We've seen this as being the biggest problem with our competitors – they are unable to scale up their operations fast enough to meet client demands due to the customized nature of their offerings. Through our seamless solution, we'll be able to move from a small pilot to a full deployment quickly. Lastly, we provide detailed analytics for our customers. By combining high-level observational analytics with machine learning, data mining and other statistical tools we are able to offer the most in-depth feedback on omni-channel retailers' current operational inefficiencies. Using these tools, we will give our clients data that is far more powerful and actionable than what they can get from any of our competitors.

The Team

At the moment, the team at Prayas is composed of its two founders, Yash Kothari and Pranshu Maheshwari, and three part-time employees, Joshua Lee (designer), Mac Cordrey (business development), and Ashutosh Goel (engineer). The team brings a diverse yet complementary skill set to the venture.

Yash Kothari, Co-Founder

Yash is a senior at Wharton from Mumbai, India. He is concentrating in operations management, marketing, and entrepreneurship. Last year, he interned at Sifteo through the prestigious True Ventures TEC program, and gained a lot of hands on startup experience during his time there. He was also selected as a Dr. William Zucker entrepreneurial intern fellow by the Wharton School for the same. Yash spends most of his time leading the outreach and sales efforts for Prayas through conversations with retailers, professors, and Wharton alumni. His efforts have opened several doors for Prayas at large retailers, including our recent agreement with Staples for a pilot program.

Pranshu Maheshwari, Co-Founder

Pranshu is a senior in the Huntsman Program from Chennai, India. He is majoring in International Studies (Spanish track) in the College, and concentrating in statistics and finance at Wharton. He is a self-taught programmer, and has been coding since he was 12. Lately, he has been combining his statistics knowledge and love for programming through interesting side projects. Some of these include a cricket analytics engine that uses Bayesian methods to predict players' careers based on their first five years, and a software to analyze popularity of Indian political parties through Twitter posts in the run up to the Indian elections. He handles the technical development at Prayas, and led the development of our initial versions of the video analysis software, along with the statistical models that we're currently using.

Progress Till Date

Prayas Analytics has made significant progress over the past year. The company is currently working with Staples Incorporated on a two-month 20-store deployment. It is expected that this contract will bring in approximately \$75,000 in revenue by the end of February 2015. Till date, the engagement with Staples has gone remarkably well. Prayas Analytics has been able to highlight over \$30 million in potential cost savings for the company through more effective queue management strategies, better staffing models, and other optimization strategies. If the 20-store deployment goes successfully, Prayas Analytics will look to sign Staples on an annual 50-store contract at an annual subscription price of about \$1 million per year.

In addition to the ongoing engagement with Staples, Prayas Analytics is currently working on paid pilots with Barneys New York (4 stores, \$8000) and The Payomatic Corporation (3 stores, \$4500). The pilots are going well and a decision for expansion to phase 2 (~20-30 stores) will be made by March 2015. Prayas is also working on bringing in 1-3 more paid pilots with large retailers over the coming three months.

In addition to the sales progress, Prayas Analytics has raised over \$25,000 from First Round Capital's Dorm Room Fund, the Weiss Tech House Innovation Fund, and Wharton Entrepreneurship. The company has been featured on Techcrunch and is also currently a part of Wharton's incubator, the Venture Initiation Program. Finally, the company just recently hired its first three non-founder employees.