Argyle Data

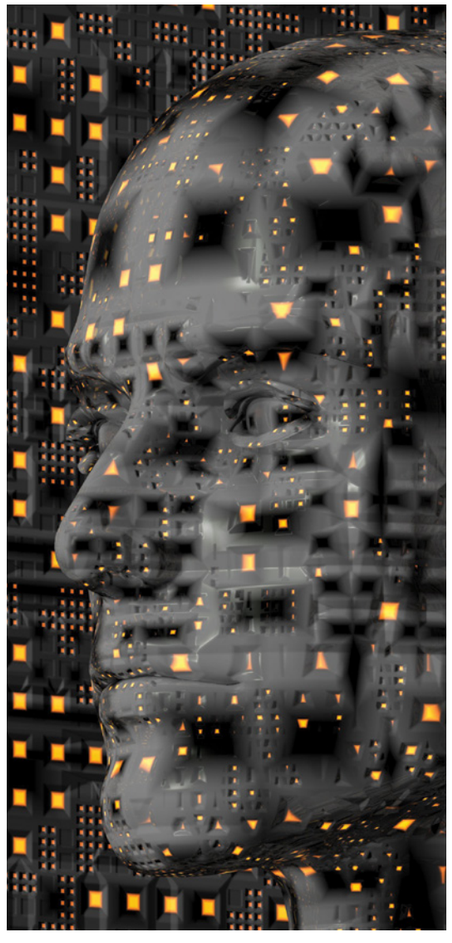
TRAILBLAZING IN BIG DATA AND MACHINE LEARNING ANALYTICS

The machine learning analytics market will reach U.S. $46 billion by 2020, a massive growth of 768 percent over 2016 figures. This data shows conclusively that Artificial Intelligence, or Machine Learning, is becoming a mainstream technology.

Helping organizations benefit from the power of intelligent applications is Silicon Valley, U.S. start-up Argyle Data. Argyle Data offers Big Data analytics applications that use a unique supervised and unsupervised machine learning approach leveraging comprehensive data lakes to obtain a 360-degree view of network traffic in real time. The company's applications currently address the fields of fraud analytics, subscriber validation, IoT Security, and OTT traffic, providing near-instant insights into high volume, high velocity network traffic.

How did Argyle Data select its market focus? "Every successful startup needs to provide cutting edge technology, to address huge problems, and to disrupt the market by making exponential improvements over the way things had been done before," explains President and CEO, Vikash Varma.

"We saw the mobile communications fraud detection space was ripe for disruption. The pace at which fraud has evolved is just staggering. Carriers were trying to use static tools to deal with a rapidly changing problem, which put them constantly behind the fraudsters. Effectively, they were bringing a knife to a gunfight and they were crying out



for new solutions. We viewed these inadequacies as an opportunity and brought in the most contemporary technology, machine learning. This has rapidly become the best tool in our customers' arsenal."

In the field of mobile fraud, using traditional database analytics and data warehousing techniques merely provided 'historical insights' that provided a rear-view picture of events that happened days, weeks, or months previously. Such systems are not capable of real-time analysis. Rules and thresholds approaches can only identify known fraud types; new or compound scams cannot be detected. Argyle Data implements an elegant and cost-effective approach, ingesting data and analyzing in real-time and narrowing the detection window from days to minutes. Utilizing machine learning to look at patterns and trends in data ingested from massive data lakes, Argyle Data is able to detect any abnormal patterns.

"In addressing the fraud problem, we were able to build our applications to expand outside fraud," notes Varma. "The intelligent applications that are built on machine learning present an opportunity for all companies. We are in the early days of this transition, but we are already seeing astonishing growth. These software platforms provide an amazing range of intelligent tools to analyze, organize, access, and guide at less cost and exponentially more effectively than older systems."

Varma goes on to explain, "At the heart of what we do is anomaly detection. While not all anomalies are fraudulent, all fraud is anomalous. Our applications allow us to detect all anomalies in data networks and from this we can identify both known and unknown fraud. But it doesn't stop there. The benefit of using big data to solve problems is that you start off with a data lake. Companies should be able to re-use all this data in different ways to solve other problems and this, of course, happens at lower cost. The pattern of our rollouts has been that customers start with network fraud analytics, but quickly move to using our machine learning for other high impact use cases."

This approach can also be extended to detecting threats in IoT networks, investigating OTT traffic volumes, or providing better subscriber validation and checking than credit scoring agencies. Success is easy to measure and ROI is almost immediate. For example, Argyle Data is able to unearth 2.5 to 3 times more fraud than traditional systems; they deliver a minimum 70 percent improvement in the accuracy of subscriber checking; they can distinguish 100 percent of VoIP traffic from other data traffic in a mobile network.

Detecting Hidden Fraud

A European carrier had experienced massive financial loss because a compromised corporate account was being used to drive traffic to a premium number. Using a combination of supervised and unsupervised machine learning, Argyle Data's layered and adaptive technology detected the anomaly. "We almost instantly found fraud that would be impossible to detect using other methods," said Varma.

Reducing Subscriber Fraud

40 percent of carriers' bad debts are associated with subscriber fraud. In high-income markets where handsets are heavily subsidized, accurately evaluating which applicants are likely to default on subscriptions or steal the handsets is a key objective. In lower socio-economic markets, SIM fraud – where dealers acquire SIMS to fraudulently collect commissions - is a substantial revenue drain. Credit checking services have only limited insights into customer credibility and most carrier approaches to the issue are neither systematic nor automatic. Argyle Data's subscriber validation application is used in these and other instances to enrich the credit rating process, providing accurate predictions in real time about high-risk customers, while smoothing the approval path for genuine applicants.

Vikash Varma, President & CEO

> We saw the mobile communications fraud detection space was ripe for disruption, with carriers crying out for new solutions. We took the opportunity to introduce advanced machine learning, which has rapidly become the best tool in our customers' arsenals

OTT Traffic Identification

As carriers move towards very-high-speed, IP-based networks, the use of VoIP (Voice over Internet Protocol) and Over-the-Top (OTT) smartphone apps has increased, leading to substantial drops in carriers' call termination fees. Argyle Data's OTT analytics solution can distinguish subscriber network traffic from OTT usage and identify voice, video, and data consumption - even down to the individual subscriber level. This capability allowed Argyle Data to pinpoint a sharpl-off in termination charges that had been perplexing an African carrier.

Credit-checking the Unbanked

The number of unbanked individuals in the world today stands at around two billion. Yet credit rating services depend on banking and credit card data to generate credit-worthiness profiles. Argyle Data is able to generate credit profiles for the unbanked based on their mobile usage.

Varma concludes, "Argyle Data's advances are influencing a fundamental disruption in mobile carrier thinking about how they can leverage big data and machine learning. Operators worldwide are questioning the effectiveness of their existing systems. Machine learning is a proven, cutting edge approach to providing near-instant insights into high-volume, high-velocity network data." SI

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20 Most Promising Technology Companies 2017

Over the years, Indian-Americans have had an influential impact on the U.S. economy. Alongside improving the business environment in the U.S., the founders and managers of these companies have created new and varied opportunities for employment. The spirit of 'being at the top' has driven these talented minds of India to leave a remarkable impression in the various domains in the U.S.

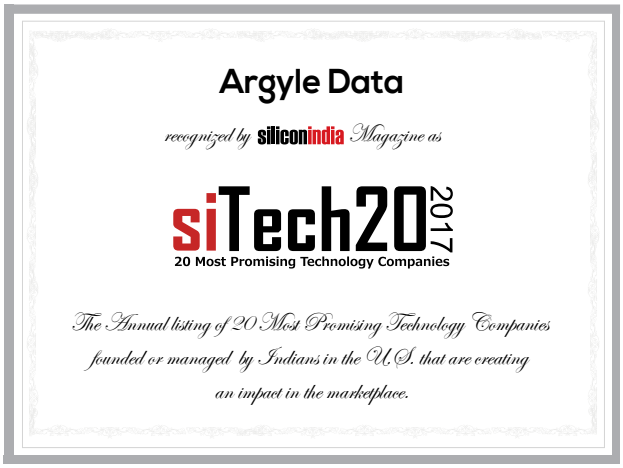
A perfect blend of creativity and imagination has led to the development of 'entrepreneurs with a difference.' The number of Indian entrepreneurs is on the rise, and young Indian men and women are climbing the ladder of innovation.

It is not about building a new business; it is about building a business that makes a difference.

The number of spurring young entrepreneurs is escalating, and there are lessons, many, to be learned from failures and successes of the predecessors. It is important that the new businesses established can procure a profit. Besides, the business environment today has changed and developed with the different technological advancements. It is thus necessary that these young entrepreneurs keep up with the growing trends and incorporate the technological advancements that are occurring in the business environments. Most businesses today revolve around the 'latest' technology and hence being tech savvy is a requirement. It is important that entrepreneurs who aim to establish themselves equip themselves with knowledge trending technologies.

In this issue, we bring to light some of the most persuasive and captivating stories of Indian entrepreneurs who have created a niche for themselves in the U.S. These are the stories of great minds and companies with solutions that bring in change alongside making an influential example for those that wish to establish themselves in the business.

The siTech20, 2017 list of companies is comprised of some of the most dynamic establishments that have created a buzz in U.S. They have augmented a new shape to the business economy with their innovative minds and have given new spectacle to the way business functions. They have freshness in idea and advancement in technology instilled in one. The impeccable quest and passion for making a difference are what keep them moving.



Company:
Argyle Data

Description:
Specializes in Hadoop, roaming fraud, domestic fraud, subscription fraud, Wangiri fraud, arbitrage threats, and negative margin threats

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