Smarter Predictions

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# SmarterHQ - Why

## Built For Marketers, By Marketers
- 40+ years multi-channel retail
- 25+ years machine learning
- 20+ years digital marketing

## Value Delivered, Clients
- Proven time to value
- Self funding platform
- 20x ROI

## Thought Leadership, Funding
- 2015 Sherpa campaign of the year
- 8 eTail award winning clients
- Funded by Battery Ventures & CNB
A platform that unites **customer intelligence** and **cross-channel marketing**.

Focuses on **attainable innovation that** grows with retailers.

**Delivers on the promise** of unifying marketing channels to provide consistent messaging, offers and promotions...and more.

Places **shoppers at the center** of the conversation to provide a **full understanding** of a shoppers relationship with a brand, from online to in-store.

Enables marketers to **take action** on this intelligence within their **existing marketing partner investments**; from email, to display to onsite personalization.
Data for Customer Intelligence
Customer-centric, Multi-channel

ENTERPRISE LEVEL

BRAND LEVEL

OTHER BRANDS

Website | Mobile App | In-Store | Call Center | 3rd Party

Desktop Site | Mobile Site | iOS | Droid | #314 | #3102 | Spring Catalog | Web Support | eBay | Amazon

#246 | #5396
Customer Intelligence – Why It Matters

WHO IS FRED?
He is a different shopper at every level…
Integrating his interactions tells a complete story.
It’s A Conversation

G O A L
Each interaction, or lack thereof, with a brand is a shopper trying to have a conversation.

W H O  W H A T
Customer Intelligence

H O W
Cross-Channel Marketing

Complete The Conversation
Tuning Abandonment - Conversation

**GOAL**
Recover a shopper that abandoned their shopping cart.

**WHO**
- Anyone

**WHAT**
- Recent Visit To Website
  - Carted Items
  - Did Not Purchase

**HOW**
- Targeted Messaging
  - Automated Email

**WHO IS KRISTEN?**
Version 1…
What is the right action?
Tuning Abandonment - Conversation

**G O A L**
Recover a shopper that abandoned their shopping cart that was acquired through paid media.

**W H O**
- Guest
- High Marketing Cost

**W H A T**
- First Visit To Website
  - Carted Items
  - Did Not Purchase

**H O W**
- Targeted Messaging
  - Targeted Offer
  - Automated Email

**WHO IS KRISTEN?**
Version 2...
What is the right action?
Tuning Abandonment - Conversation

**GOAL**
Recover a shopper that abandoned their shopping cart that was acquired through paid media.

**WHO**
- Guest
- High Marketing Cost

**WHAT**
- First Visit To Website
- Carted Items
- Did Not Purchase

**HOW**
- Targeted Messaging
- Targeted Offer
- Automated Email
- Onsite Messaging

Onsite
Optimizing Margin – The “Non-Conversation”

**G O A L**
I want to optimize the value of my High AOV, engaged customer.

**W H O**
- Customer
- High Dollar AOV
- Highly Engaged

**W H A T**
- Browsed Premium Product several times in past 3 days
- High predicted propensity to purchase within the next 3 days

**H O W**
- Get out of his way and let him purchase.
- Save margin and do not make an offer if he doesn’t purchase within 3 days, then make an offer if purchase propensity still high

Display
Onsite
Email
Predictive Models -> Insights

- Predicted Next Product/Category to Purchase
- Cross-Sell / Up-Sell / Recommendations
- Customer Attrition Risk
- Category Browse Abandonment
- Purchase Replenishment
- Predicted Days to Next Purchase
- Predicted Days to Next Visit
- Customer (Lifetime) Value
- Marketing Attribution
- Checkout Abandon Causality
- Asset Quality
- Visit Quality
- Engagement (with Visit Quality Decay)
Days To Next Purchase: Single Regression Model
Days To Next Purchase: Single Regression Model, One Customer

- Uni-modal
- One value per customer

6.8 days +/- 1 day

Single customer

1 day, 7 days, 15 days, 30 days
Days To Next Purchase: Set of Binary Classification Models
Days To Next Purchase: Set of Binary Classification Models

- 1 day
- 3 days
- 7 days
- 15 days
- 30 days
- 2-3 days
- 3-7 days
- 7-15 days
- 15-30 days
- Single customer
Days To Next Purchase: Set of Binary Classification Models

- 16 days
- 1 day
- 7 days
- 30 days
- 3 days
- 15 days
- 15-30 days
- 2-3 days
- 7-15 days
- Single customer

Days:
- 1 day
- 3 days
- 7 days
- 15 days
- 30 days
Models for Customer Intelligence
How Many Do We Need?

**Enterprise Level**

**Brand Level**

**Other Brands**

- Website
- Mobile App
- In-Store
- Call Center
- 3rd Party

Desktop Site
Mobile Site
iOS
Droid
Android
#314
#102
#246
#536
Web Support
Spring Catalog
eBay
Amazon
What Data Best Predicts Behavior?


Dean Abbott says:
February 18, 2015 at 15:47

Fantastic post. I tweeted out a series of tweets (@deanabb) related to the behavioral vs. demographic data you commented on and I couldn't agree more:

If you search through the 300 posts I've written thus far (this one is 301!), and the 638,442 words in those posts, you'll notice that I've never, ever, never asked you to

Avinash Kaushik says:
February 19, 2015 at 17:43

Dean: Amen!

While I recognize that both you and I are in a minority, I am happy to have a kindred spirit.

Sadly, it will take a while for the Sr. Leaders in control to unlearn a lifetime of one way of thinking, but I'm optimistic it will happen.

Oh, and even when the smart ones say personalization, they really mean understanding a person's behavior and then reacting. They just call it demographics! :)

Thank you so much for sharing your experience with all of us.

Avinash.
Data Preparation: Feature Creation
Data Preparation: Variable Reduction

- **Low Variance Filter**: rm var < 0.001
- **Column Resorter**: Node 700
- **Column Filter**: remove strings that done need
- **Linear Correlation**: Node 698
- **Correlation Filter**: only 0.8 and lower
Data Preparation: Stratified Sampling (for speed only)
Modeling—Lots of Preparation to Get to a Single Model
A Quick Aside on Target Shuffling
A Quick Aside on Target Shuffling: 500 runs
Thank You!!