

IOWA LIQUOR STORES
IDENTIFYING
NEW LOCATION

HOW DO WE IDENTIFY A NEW STORE LOCATION IN IOWA?

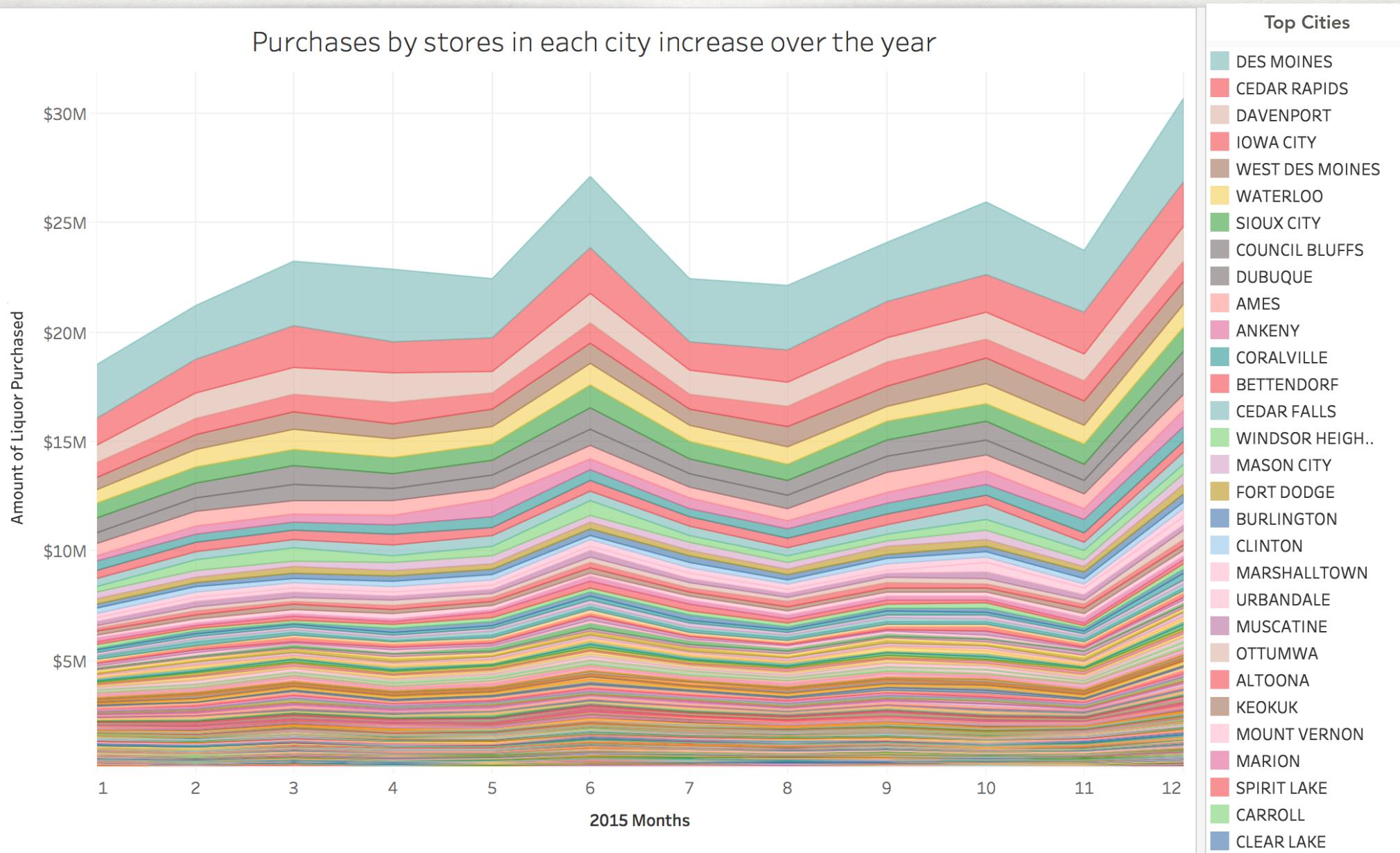
- What data are we looking at for this analysis?
 - Sales of liquor from Iowa Alcoholic Beverages Division to Class E stores.
 - Inventory purchase data from January 2015 through March 2016
 - Types of alcohol, costs, and volume by store
- US Census data (population) and College Scorecard data (university enrollments).
 - Population data by city, estimates for 2015, 2016, and growth
 - College/University 2 to 4 years current enrollments

PREDICTIVE MODELING

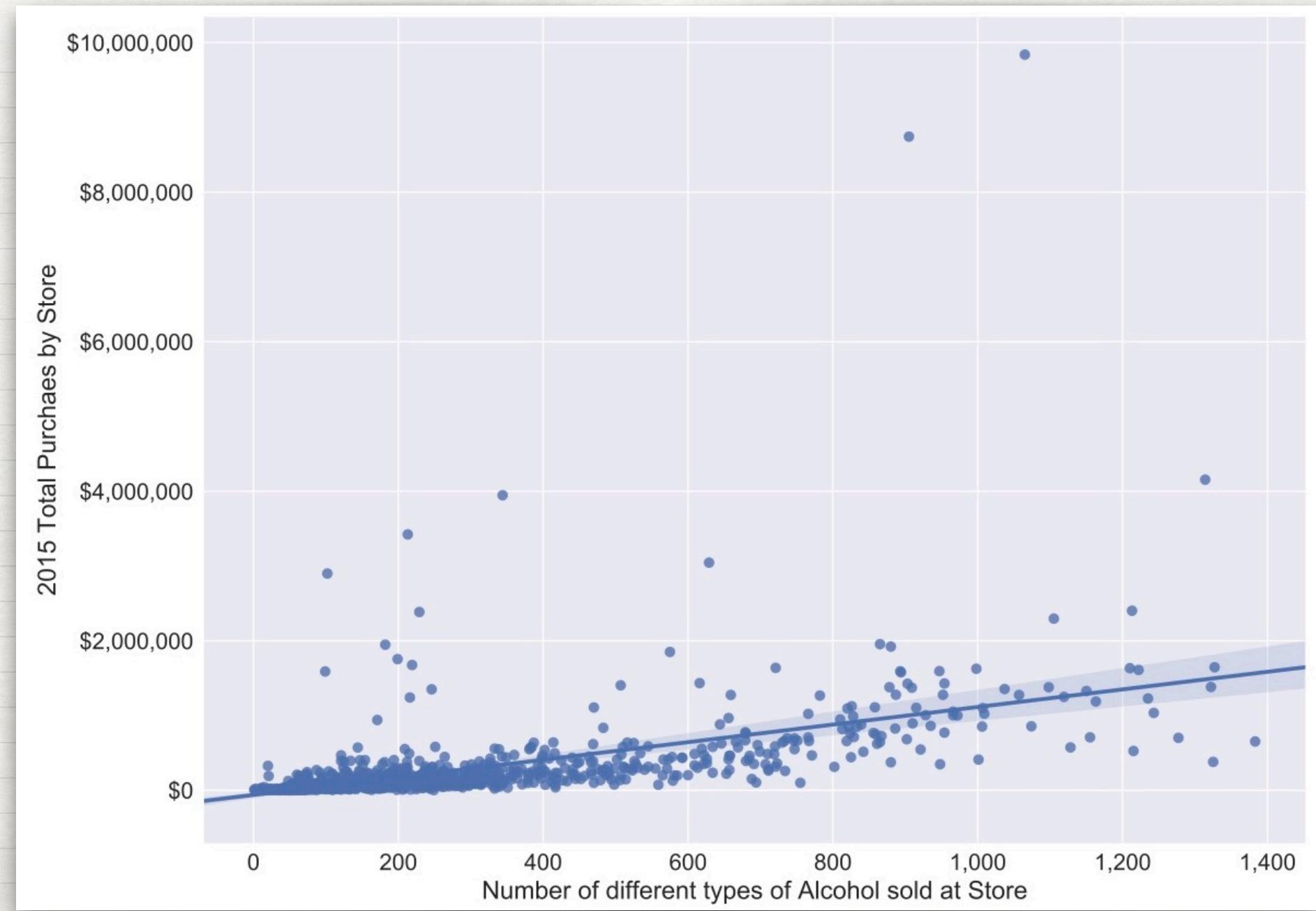
- Using that data, we built a model that accounts for over 90% of variation in total annual purchases
 - Trained model on 2015 data and use it to make predictions for 2016 from all cities with stores as of March 2016
 - Recommendations are based on prediction how much a new store can expect to purchase in 2016

$$\frac{\text{Total Purchases in City}}{\text{Current Number of Stores} + \text{New Store}}$$

Purchases by stores in each city increase over the year



STORES WITH MORE VARIETY MOVE MORE PRODUCT



DES MOINES - WINDSOR HEIGHTS

- Des Moines: \$33 Million 2016 projected total purchases
 - New store projected: \$431,000
 - Largest population center, but 76 current stores and 14 others have closed since January 2015
- Windsor Heights: \$3.7 Million 2016 projected total purchases
 - New store projected: \$533,000
 - Part of Des Moines metro area (more competition), but area itself only has 6 stores and none have closed since Jan 2015
 - Competitor: Sam's Club (\$596k 2016 purchases as of March, low variety)
 - Competitor: Hy-Vee (\$172k purchases 2016 as of March, mid-variety)
 - Opportunity for variety store

IOWA CITY

- \$9.2 Million 2016 projected sales
 - New store projected: \$357,000
- 25 current stores, only 1 store closed since January 2015
- 74k population, 22k undergraduates, highest growth rate of top predictions by model (1.32%)
- Top Competitor: Hy-Vee with \$1 Million purchased by March 2016
- Competitor: Liquor Downtown with \$226k purchased by March 2016
 - 644 different types of alcohol purchased in 2015
 - Strong twitter presence, caters to college
- Ames City has a similar make-up and worth exploring

MOUNT VERNON

- Number one pick, highest prediction by model
- Near Iowa City and Cedar Rapids
- \$2.3 Million 2016 projected sales
 - New store projected: \$790,000
- 2 current stores (1 more in adjacent Lisbon), 1 store closed since January 2015
- Top Competitor: Wilkie Liquors with \$602K already purchased by March 2016
 - Established 1987, specialize in wine, Facebook presence
 - 865 different types of alcoholic drinks purchased in 2015 (out of a total of 3,029 sold across the state of Iowa)

DOESN'T LOOK LIKE MUCH, DOES IT?

WILKIE LIQUORS



POSSIBLE IMPROVEMENTS

- Build model using a larger time period
 - We would be able to better see annual trends
 - Population data would be more granular (both city-wide and university enrollments)
- Utilize geographic data to model
 - Actual proximity to other stores (current model uses cities to group stores not actual distances)
 - Population densities
- Store types: Grocery? Wholesales? Liquor only?
- Retail prices of alcohol