UBS Pitch Challenge

The University Innovation Challenge

NEW YORK UNIVERSITY

UBS

Meet the Team

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Deconstructing the Secret Sauce

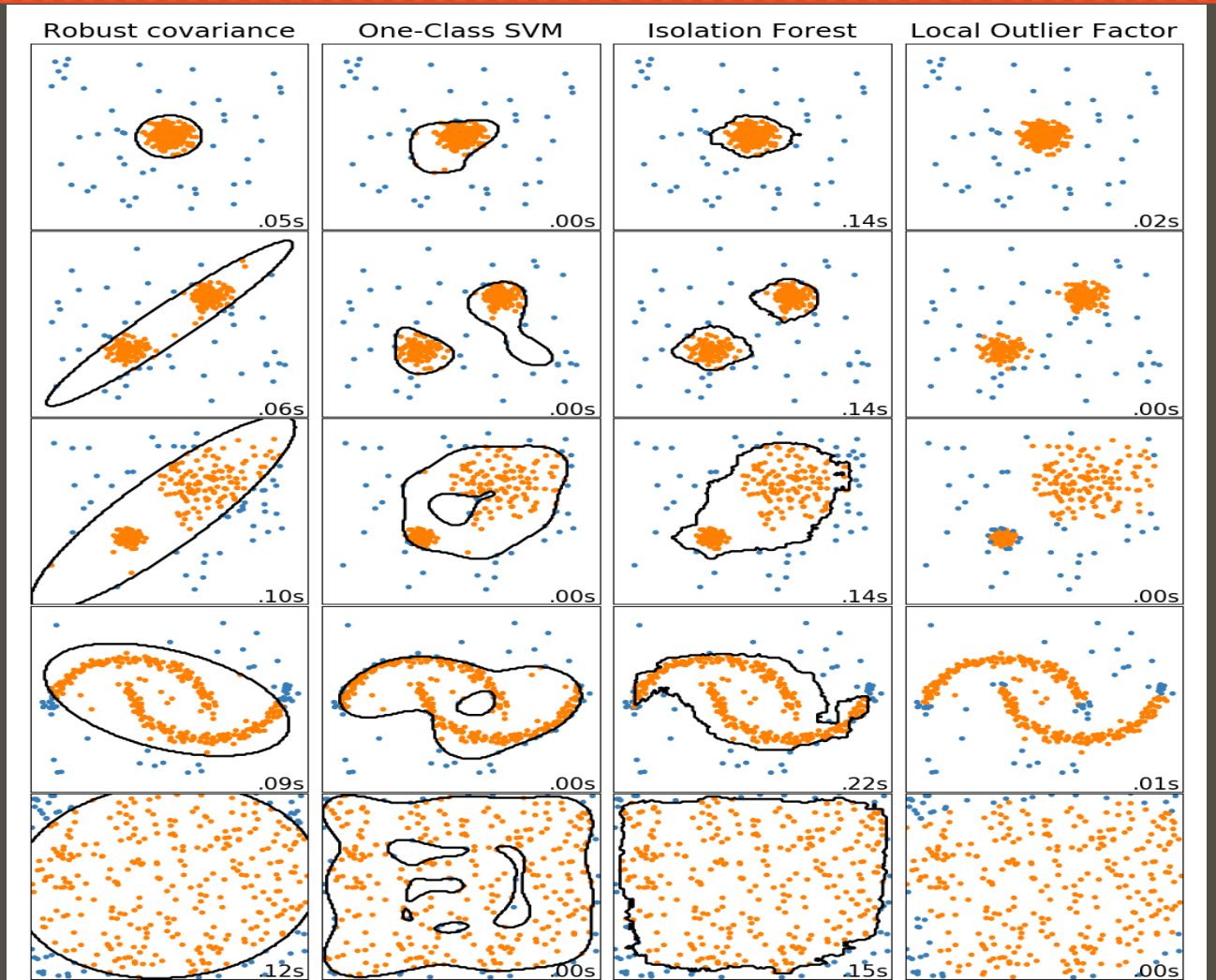
- UBS is a world wide leader in wealth management
- Deconstruct, quantify, and automate UBS management's collective knowledge of the wealth management market
- Create a model that will find locations without UBS branches that profile similarly to areas where management has already opened a branch
- Deploy our machine learning models in a disciplined, systematic process that will continue to improve over time

Feature Selection

- Adjusted Gross Income
- Ordinary + Qualified Dividends
- Business or Professional Net Income
- Self Employed Retirement Plans
- Itemized Deductions
- Real Estate Deductions
- Alternative Minimum Tax
- Earned Income Credits
- Unemployment Compensation
- Educator Expenses per Educator Returns
- Total Tax Credit per Gross Income
- Total Income
- Total Taxable Pensions and Annuities
- Charitable Contributions
- Total Net Investment Tax
- Change in Number of Filings 2012-2016

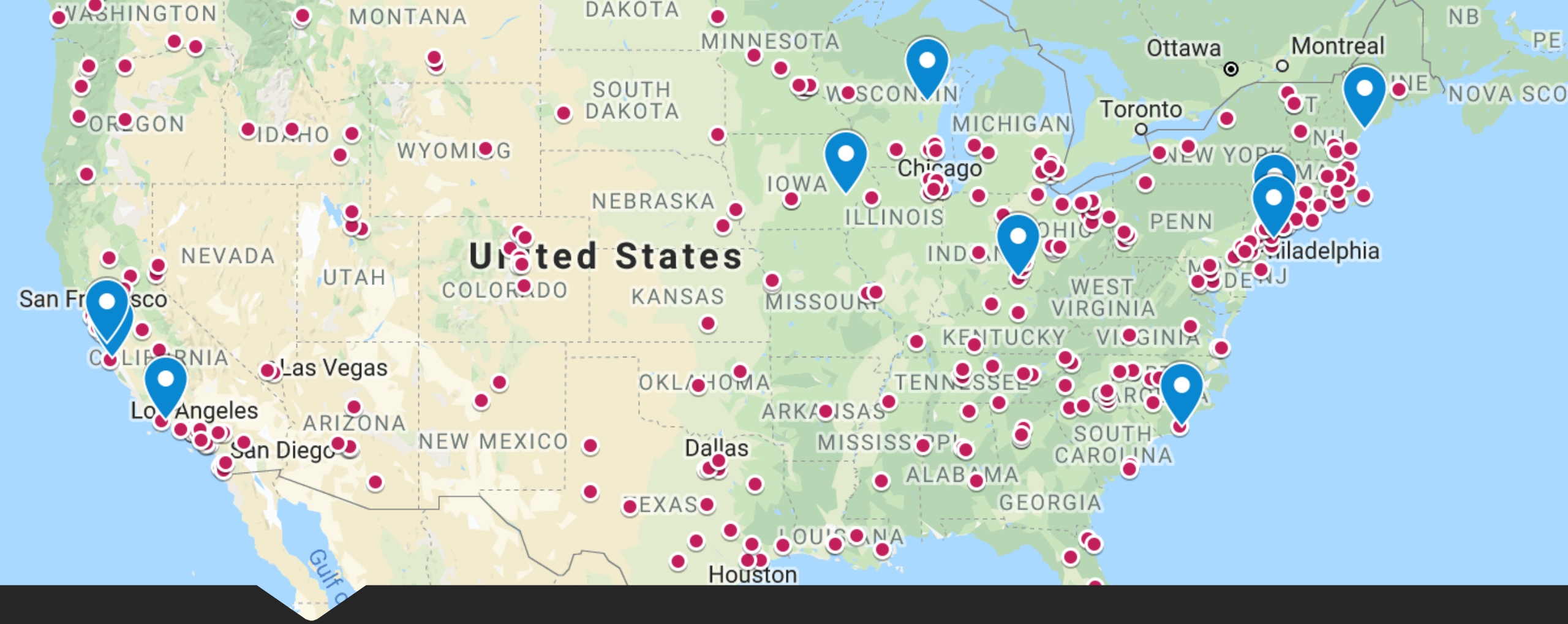
Machine Learning Model Selection

- One Class SVM vs. Isolation Forest vs. Local Outlier Factor



Our Process

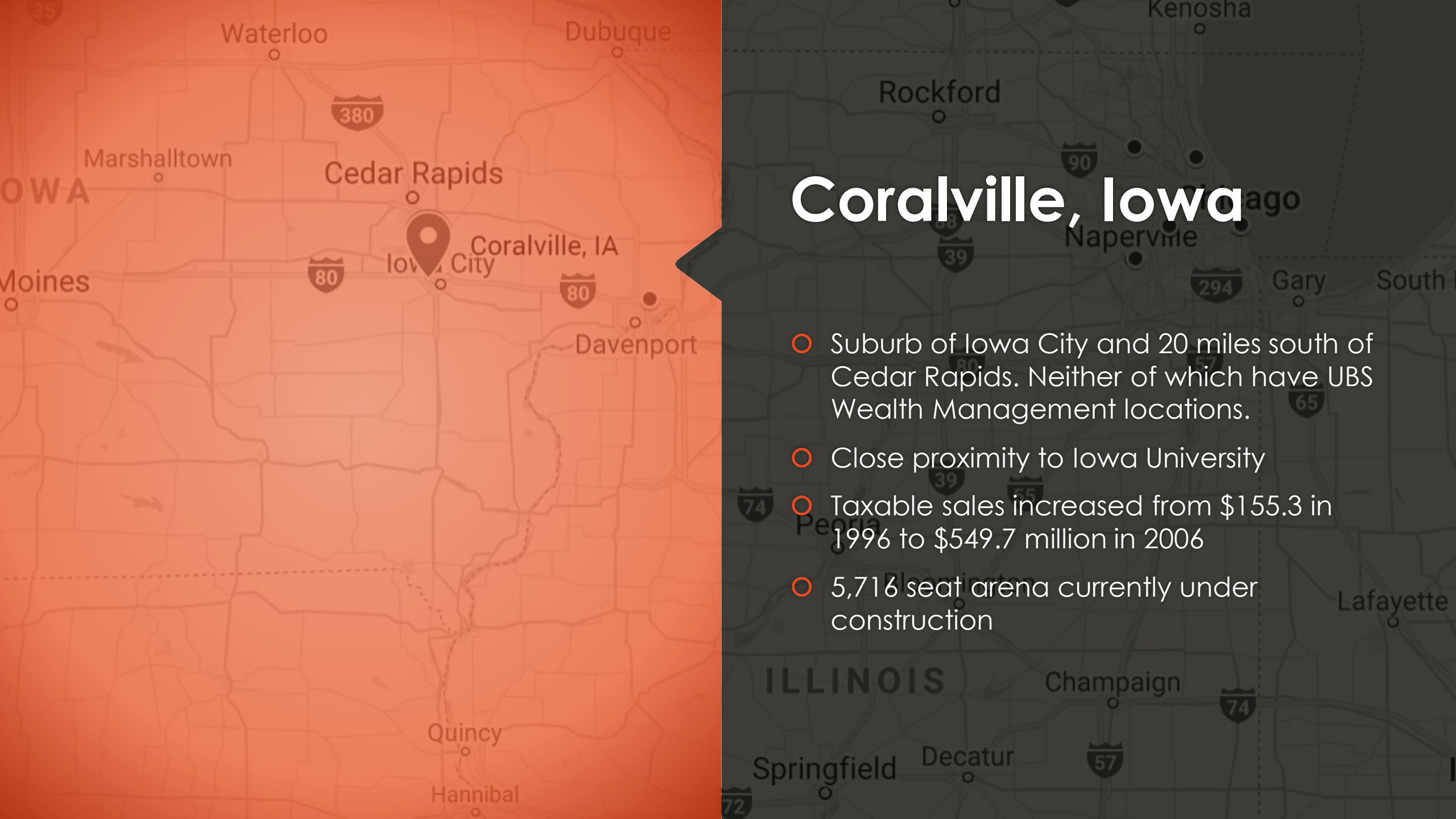
- Automated at each step so that the algorithm can be constantly improved and updated any time there is an update to the feature data or list of UBS branches
- Eventually connected to APIs and multiple data sources to increase automation and repeatability



The Next Three UBS Wealth Management Branches

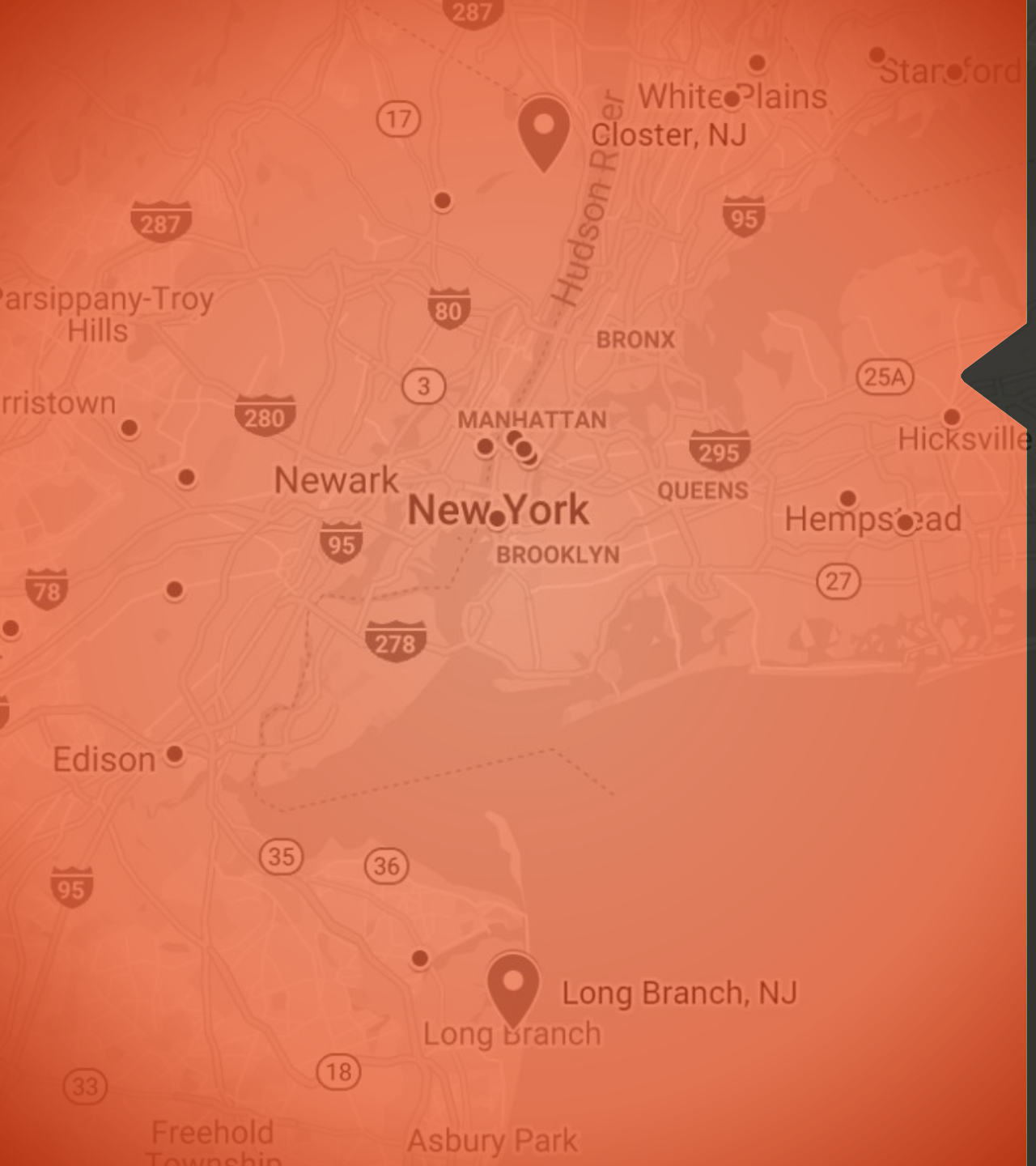
Carpenteria, California

- Located 12 miles south of Santa Barbara
- Host of California's Avocado Festival
- Notable Residents: Kevin Costner, Dennis Miller, Alan Thicke and Ellen Degeneres
- Home to several construction and manufacturing technology companies



Coralville, Iowa

- Suburb of Iowa City and 20 miles south of Cedar Rapids. Neither of which have UBS Wealth Management locations.
- Close proximity to Iowa University
- Taxable sales increased from $155.3 in 1996 to $549.7 million in 2006
- 5,716 seat arena currently under construction



Long Branch, New Jersey

- Established as a beach resort town in the late 18th century
- Broadway Center is a planned entertainment and commercial hub
- City and State incentivizes development after Hurricane Sandy
- Birthplace of Bruce "the Boss" Springsteen

Next Steps

- Explore which features are driving decision making model; continue to add more features
- Add internal UBS data, particularly branch revenue
- Deal with cities that have multiple branches
- Continue to improve automation by tagging nearby locations and connecting to APIs
- Research competitor wealth management locations and repeat process
- Dive deeper into our three suggestions in a qualitative review
- Open up new branches!