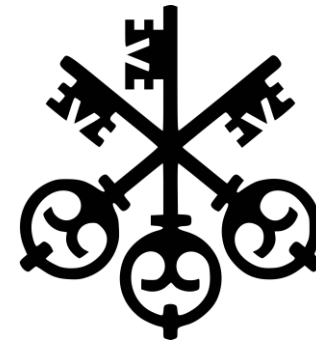


UBS Pitch Challenge

The University Innovation Challenge



NEW YORK UNIVERSITY



UBS

Meet the Team

- Charles Waters
Stern 2020
Full-Time MBA
- Robert Adeshev
Stern 2020
Full-Time MBA
- Jonathan Grohs
Stern 2020
Full-Time MBA
- Thang Chu
Courant 2020
M.S. in Comp Sci
- Sankalp Verma
Courant 2019
M.S. in Info Sys

Deconstructing the Secret Sauce

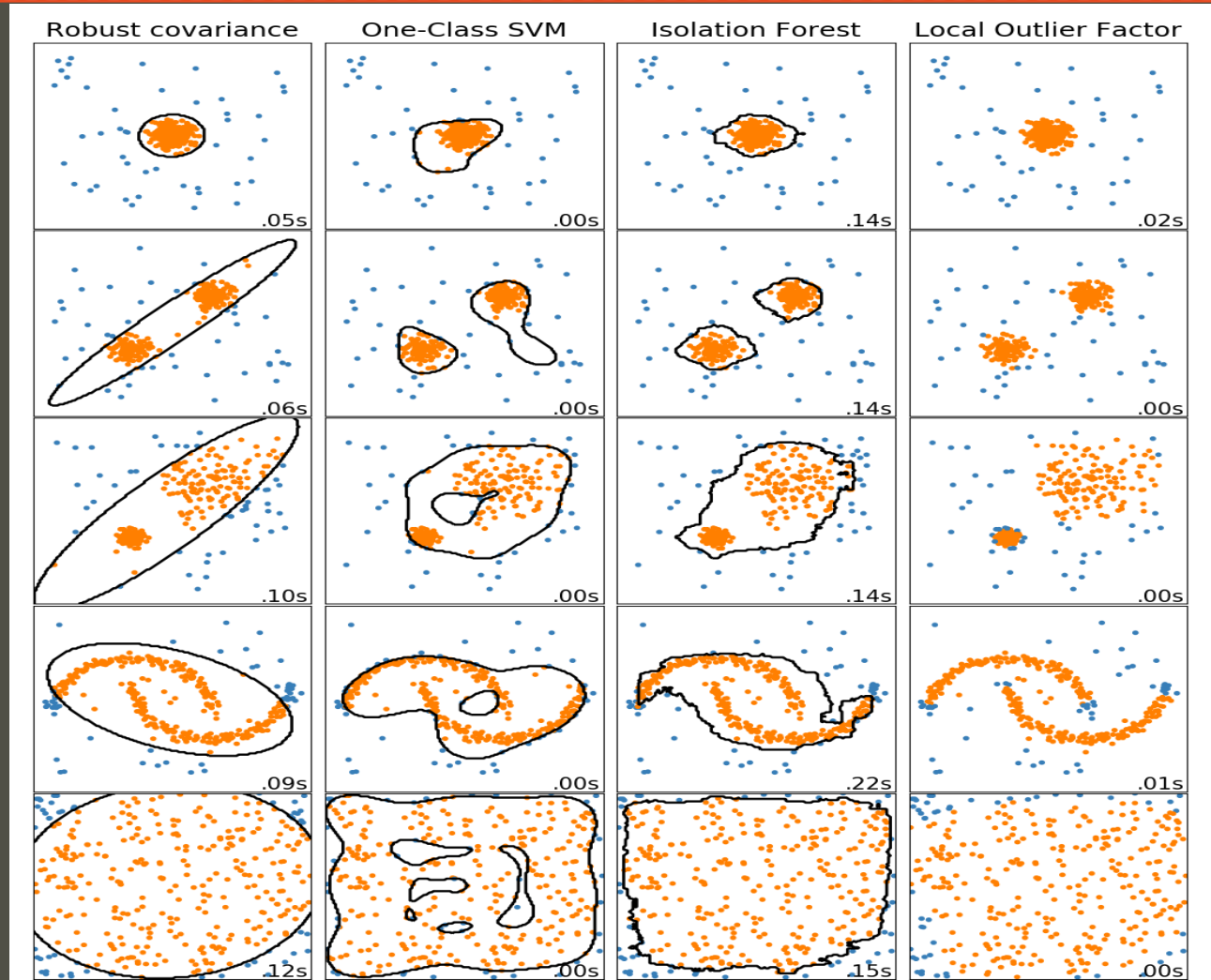
- UBS is a world wide leader in wealth management
- Deconstruct, quantify, and automate UBS management's collective knowledge of the wealth management market
- Create a model that will find locations without UBS branches that profile similarly to areas where management has already opened a branch
- Deploy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

Feature Selection

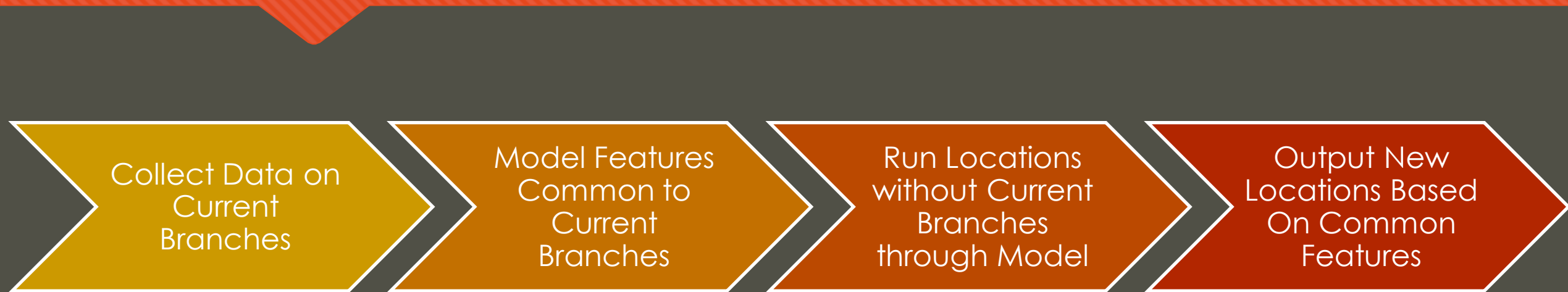
- Adjusted Gross Income
- Ordinary + Qualified Dividends
- Business or Professional Net Income
- Self Employed Retirement Plans
- Itemized Deductions
- Real Estate Deductions
- Alternative Minimum Tax
- Earned Income Credits
- Unemployment Compensation
- Educator Expenses per Educator Returns
- Total 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

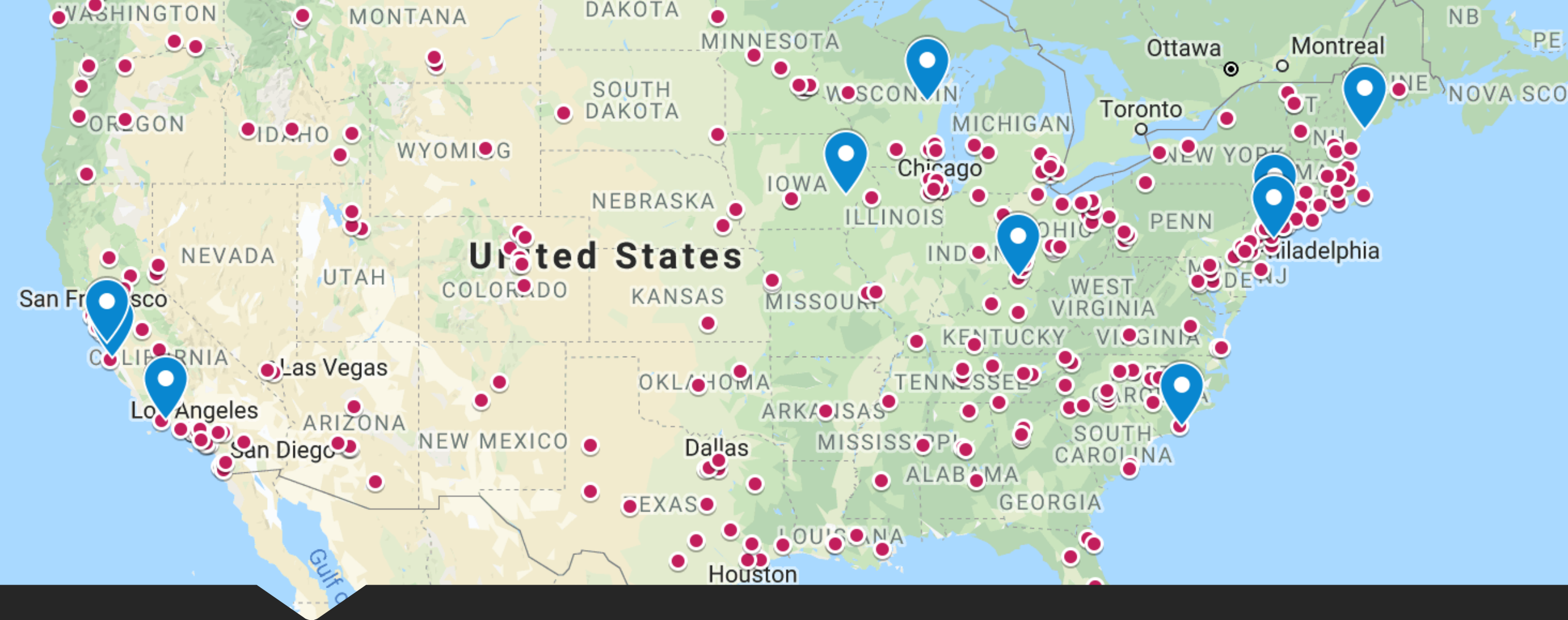
○ One Class SVM vs. Isolation Forest vs. Local Outlier Factor



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

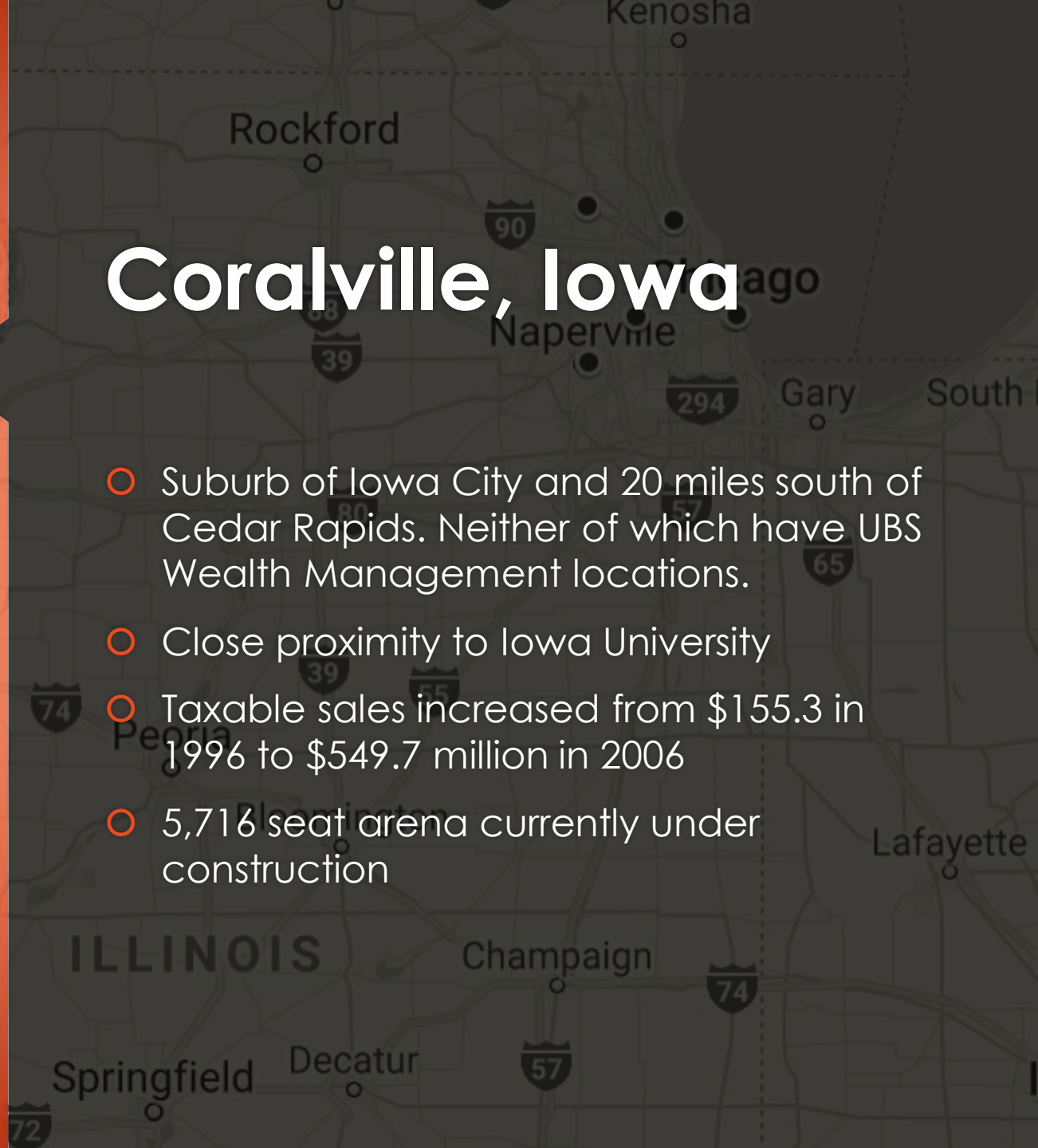
Carpenteria, California

- 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



A map of Long Branch, New Jersey, and its surrounding areas. The map is divided into two main sections: an orange-tinted left half and a dark grey right half. The orange section shows a detailed map of the New York City metropolitan area, including parts of New York, New Jersey, and Connecticut. Key locations like Manhattan, Bronx, Queens, Brooklyn, Newark, and Edison are labeled. Major highways such as I-95, I-80, I-280, I-278, I-287, I-78, I-35, I-36, I-33, and I-295 are marked with their respective shields. A red location pin is placed in the northern part of the orange section, near White Plains and Closter, NJ. The dark grey section shows a map of Long Branch, NJ, and the surrounding Long Island Sound and New Jersey Bight. Key locations like Riverhead, Hampton Bays, Shirley, Commack, Hicksville, Hempstead, Bay Shore, and Freehold Township are labeled. Major highways like I-495, I-25A, I-25, and I-27 are marked. A red location pin is placed in the southern part of the dark grey section, near Long Branch, NJ. The title 'Long Branch, New Jersey' is written in large white text across the top of the dark grey section.

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!