

# BCG Gamma | Trend Forecast

## The Team



Faculty Mentor: Vivek Farias  
PhD Advisor: Deeksha Sinha

## The Project

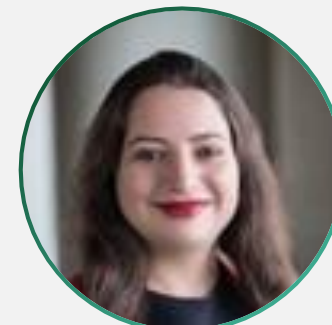


### CLIENT

- Hopes to capture consumer sentiment and preferences
- Proposed we forecast which trends will hit market in a year
- Used to guide buying and product development strategy



- How is consumer sentiment quantified?
- Which models to forecast with?
- Team comprised of data scientists and consultants



Kenza Sbai



Tim Valicenti



Jit Tan



Julien Bohne



Sithan Kanna

MIT Summer Consultants  
& Data Scientists

BCG Project  
Leader

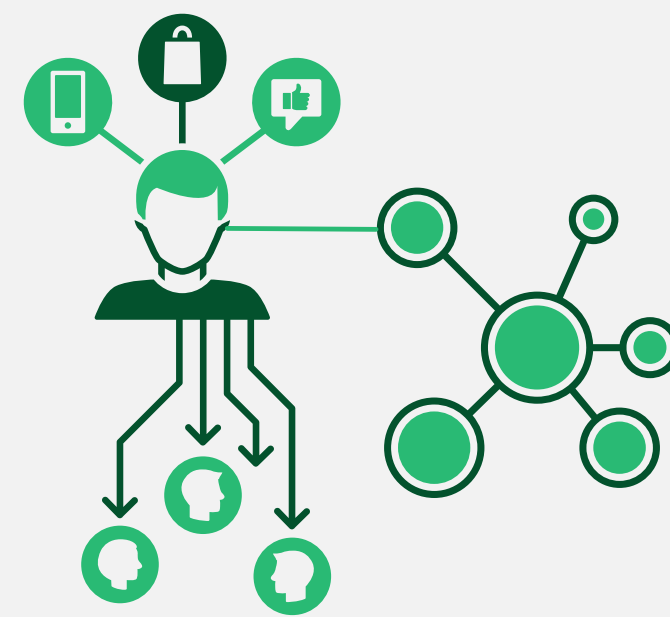
BCG Consultants & Data  
Scientists

## Google Trends



- Used APIs to live connect to entire Google Search corpus - refined using the appropriate category filters
- Used a small corpus of 450 terms to test our first forecasting and clustering methods
- \*Issue:** data reflects demand of trends that already hit market - need earlier signals

## Influencers



3.5 million tweets from 1240 different accounts

## twitter



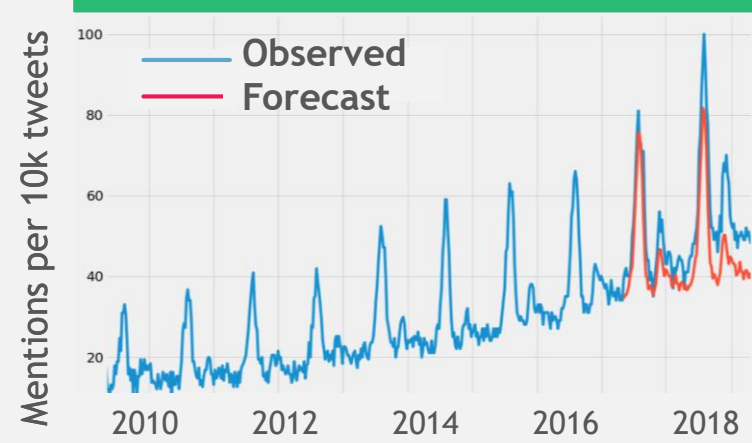
- Using a seed of selected relevant influencers
- Curating their mutual friends on Twitter to keep those who are focused on the same segment
- Collect the users Tweets (text, date, likes...)

## Social Media Data

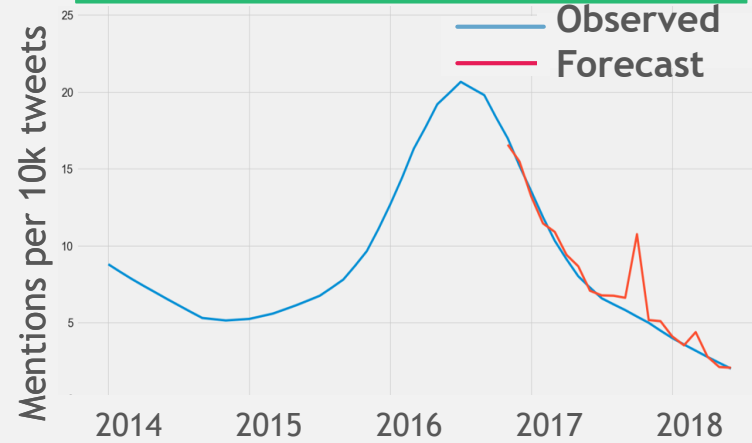
## Trend Forecasting



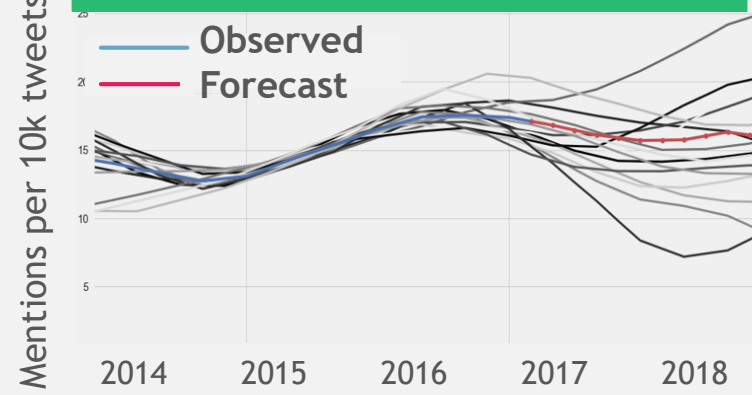
### Prophet Library (Regression)



### Gradient Boosting Machine

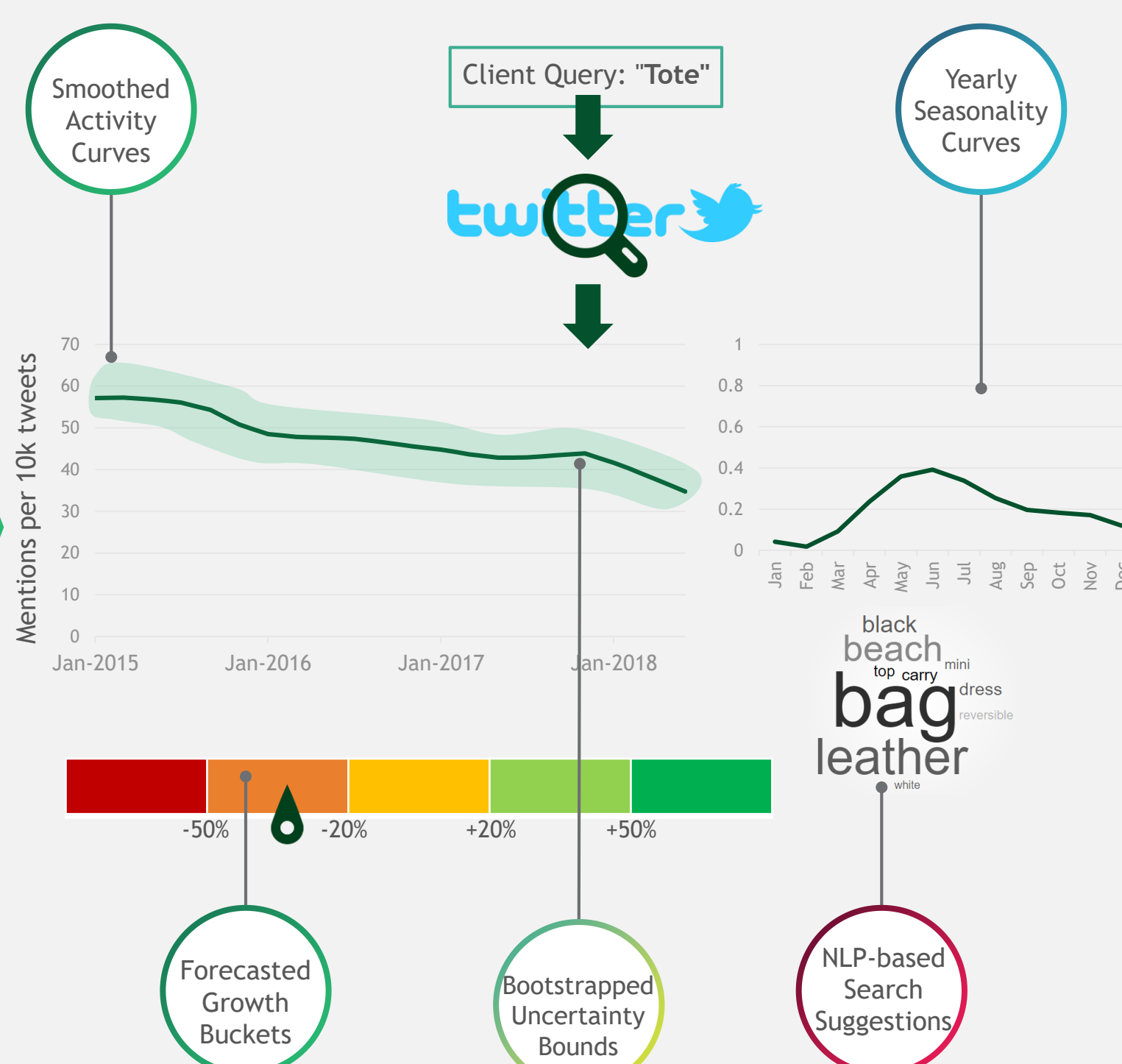


### Curve Matching (Similarity)†

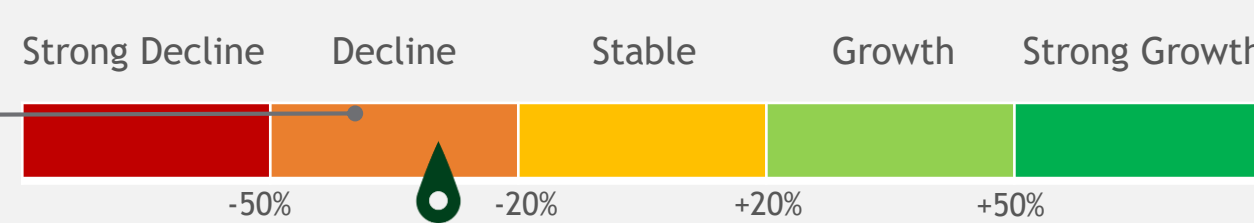
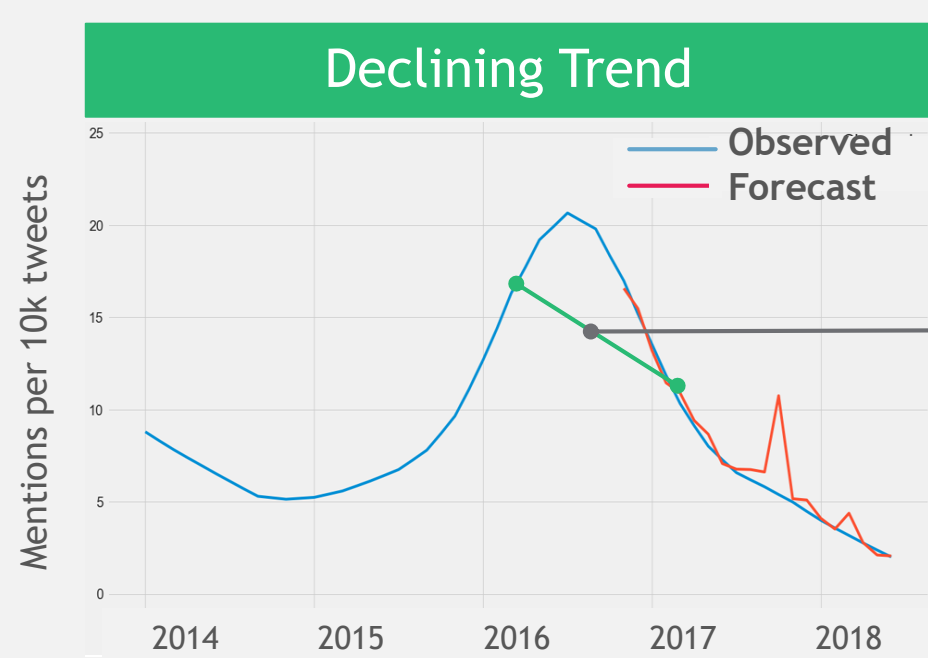


† Grey-scale curves show the 15 most similar segments

## Trend Guidance



## Growth Bucketing

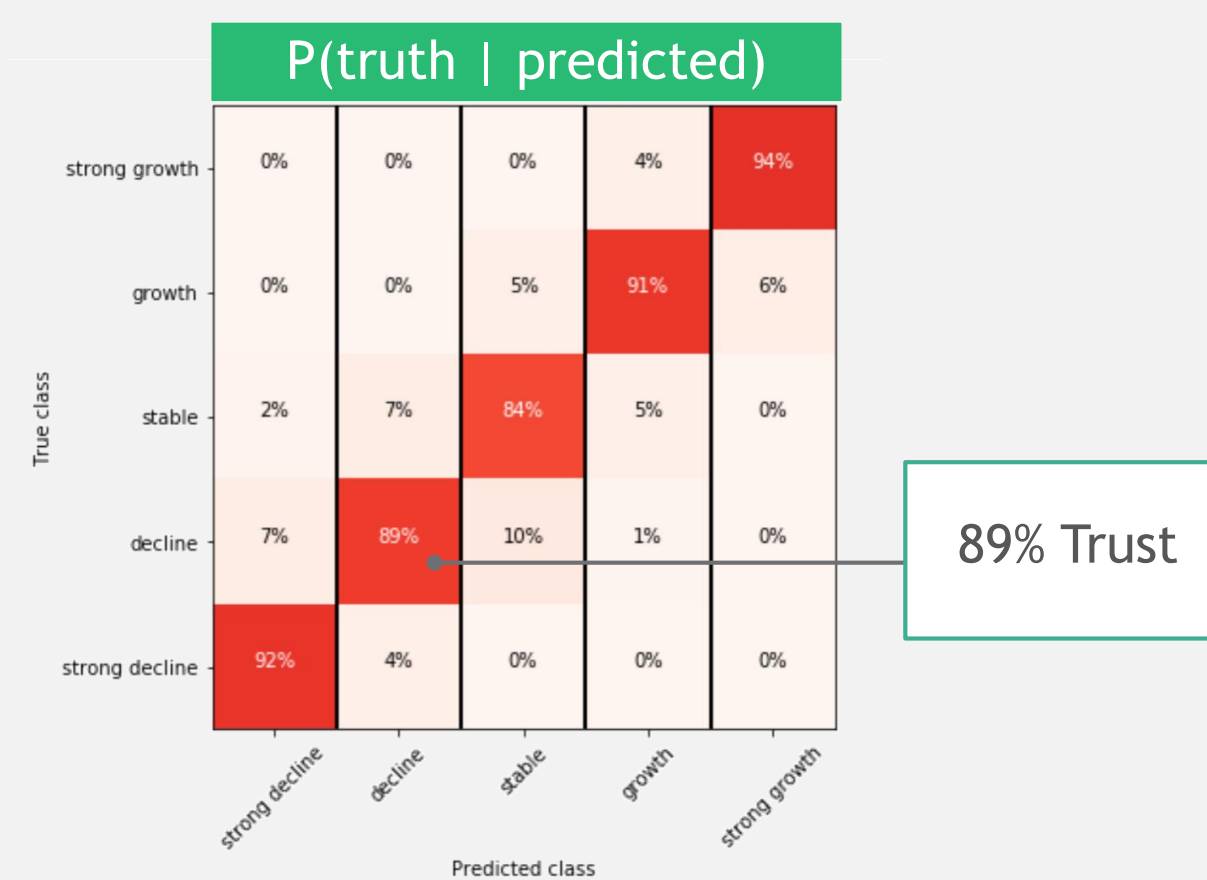


5

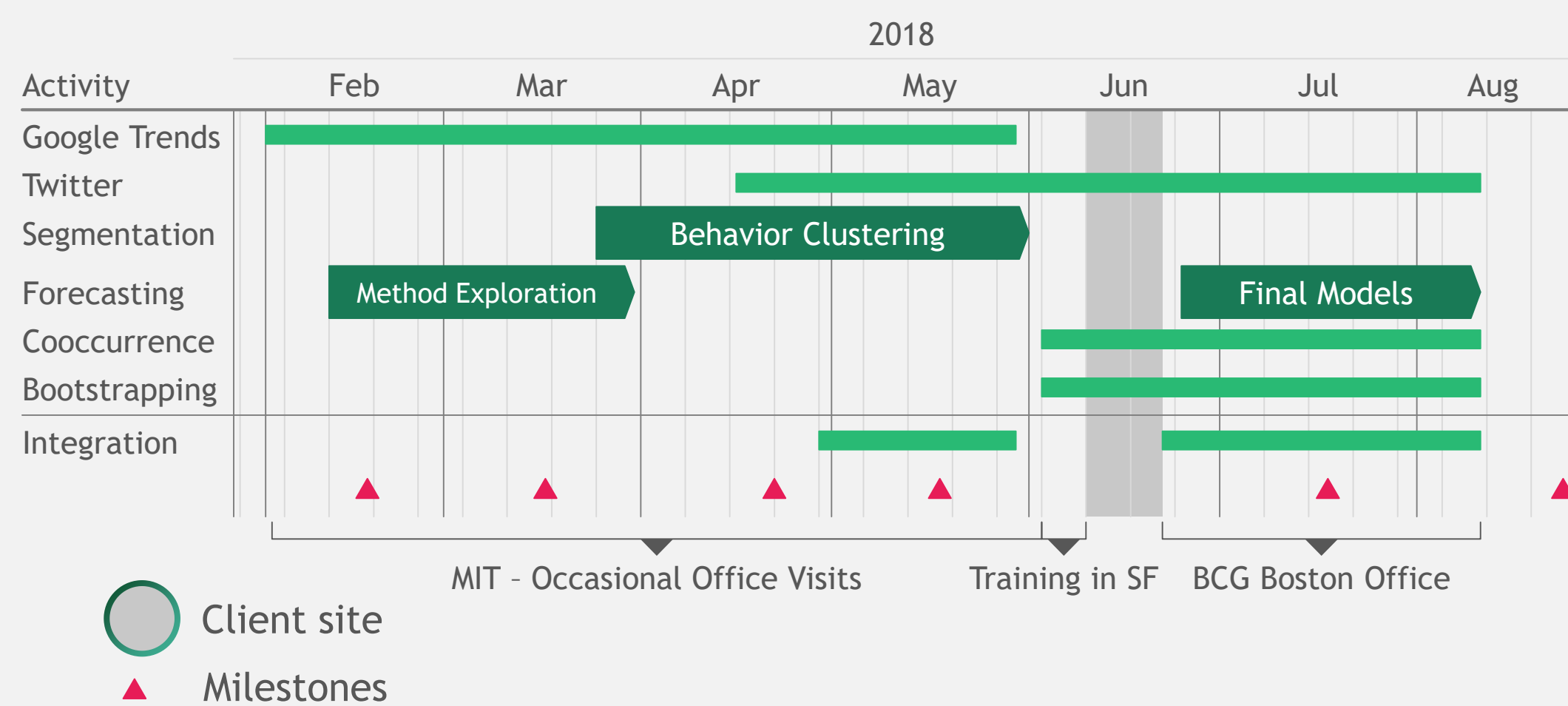
Interpretable  
Buckets Of  
Growth

90%

Best Model  
Accuracy



## Project Timeline



## The Impact



### CLIENT

- Designed features for the overall solution provided to the client
- Integrated our work to the solution through an ETL pipeline
- Provided real-time insights on consumer trends
- Improved trends analysis for product developers and buyers' decision making
- User-test the solution with client users
- Continue aggregating Twitter data to get the most relevant analysis
- Evaluate the effectiveness of decisions made based on our solution for future development cycles