



Apple Data challenge

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Agenda

- Introduction
- Recommendations for subscription growth
- Overview of Subscription Conversion Trends
 - Trend by Click Date
 - Trend by Click Date by Category
 - Trend by Category
- A/B Test Result
- Recommendations for subscription growth
- Analytical Approach Explained
- Q&A



Introduction

Pippin

Subscribe



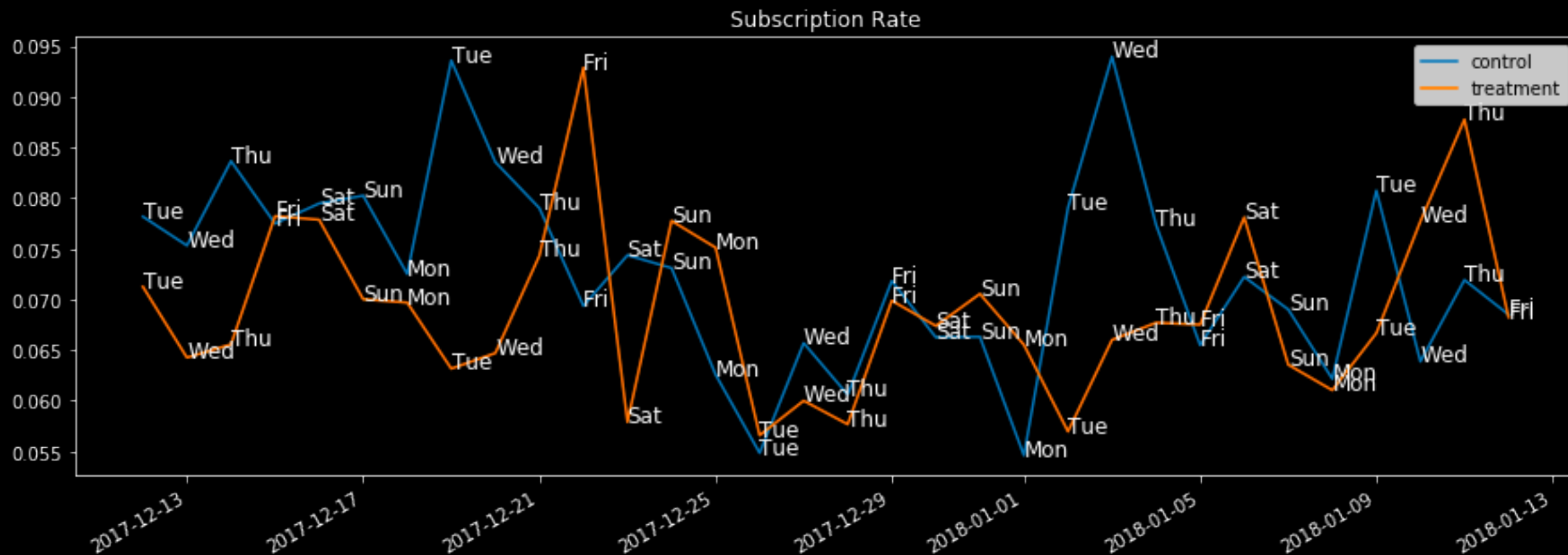
Recommendations for subscription growth

- Overall:
- Incentive users to add their credit card to app
 - Simplify action needed (i.e. collaborate with PayPal)
 - Design features to help retain the credit cards on files
- Learn from desktop app design to benefit mobile web platform
- Launch more campaigns targeting at urban users
- A/B Test:
- Recommend to not launch new feature
- Next step:
 - Run A/B Testing with desktop users added in non-holiday periods



Overview of subscription conversion trend

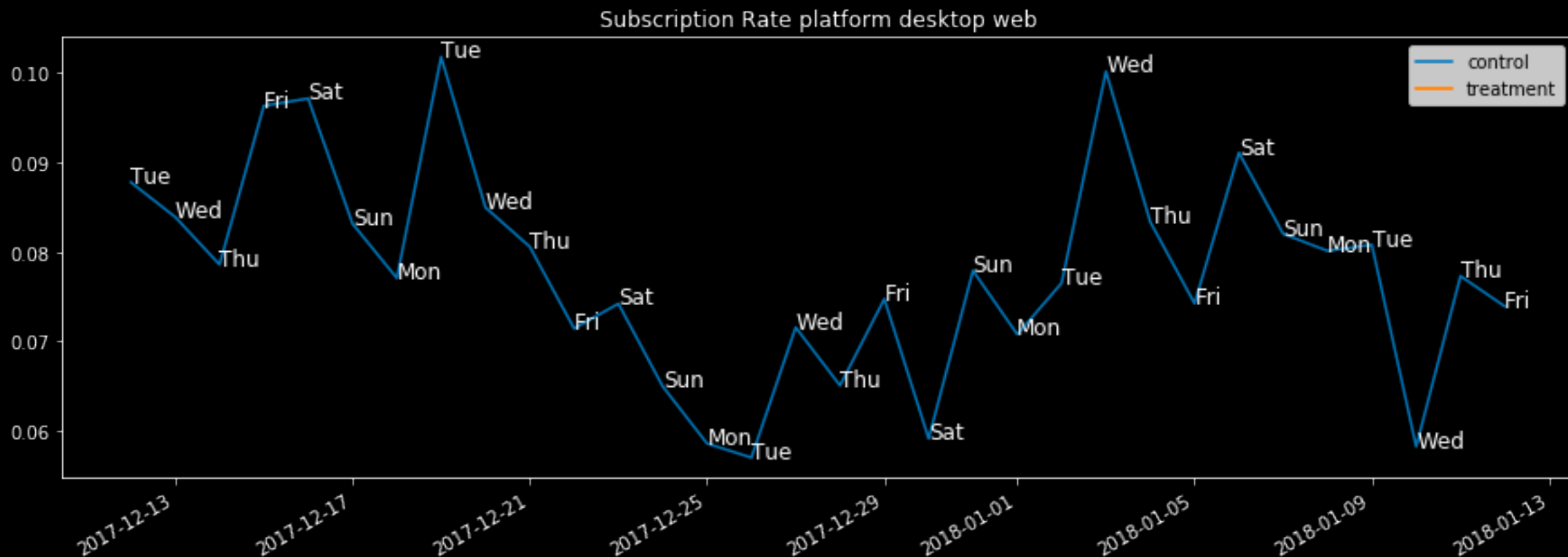
Trend by Click Date





Overview of subscription conversion trend

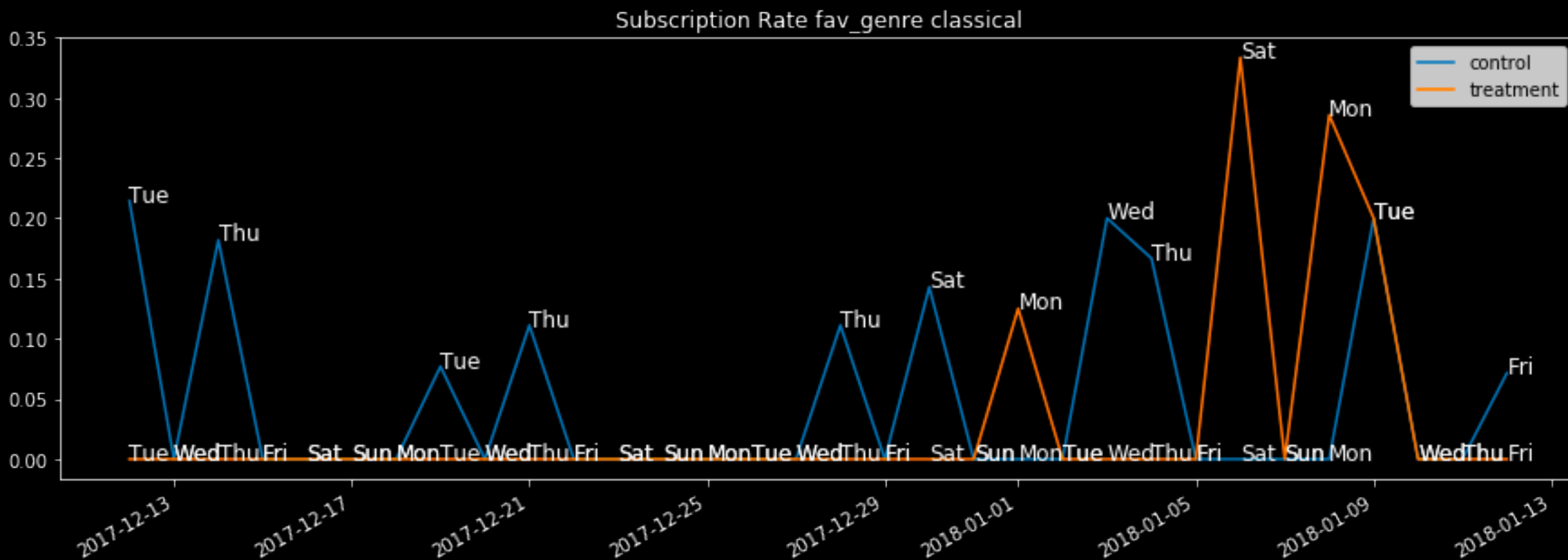
Trend by Click Date by Category





Overview of subscription conversion trend

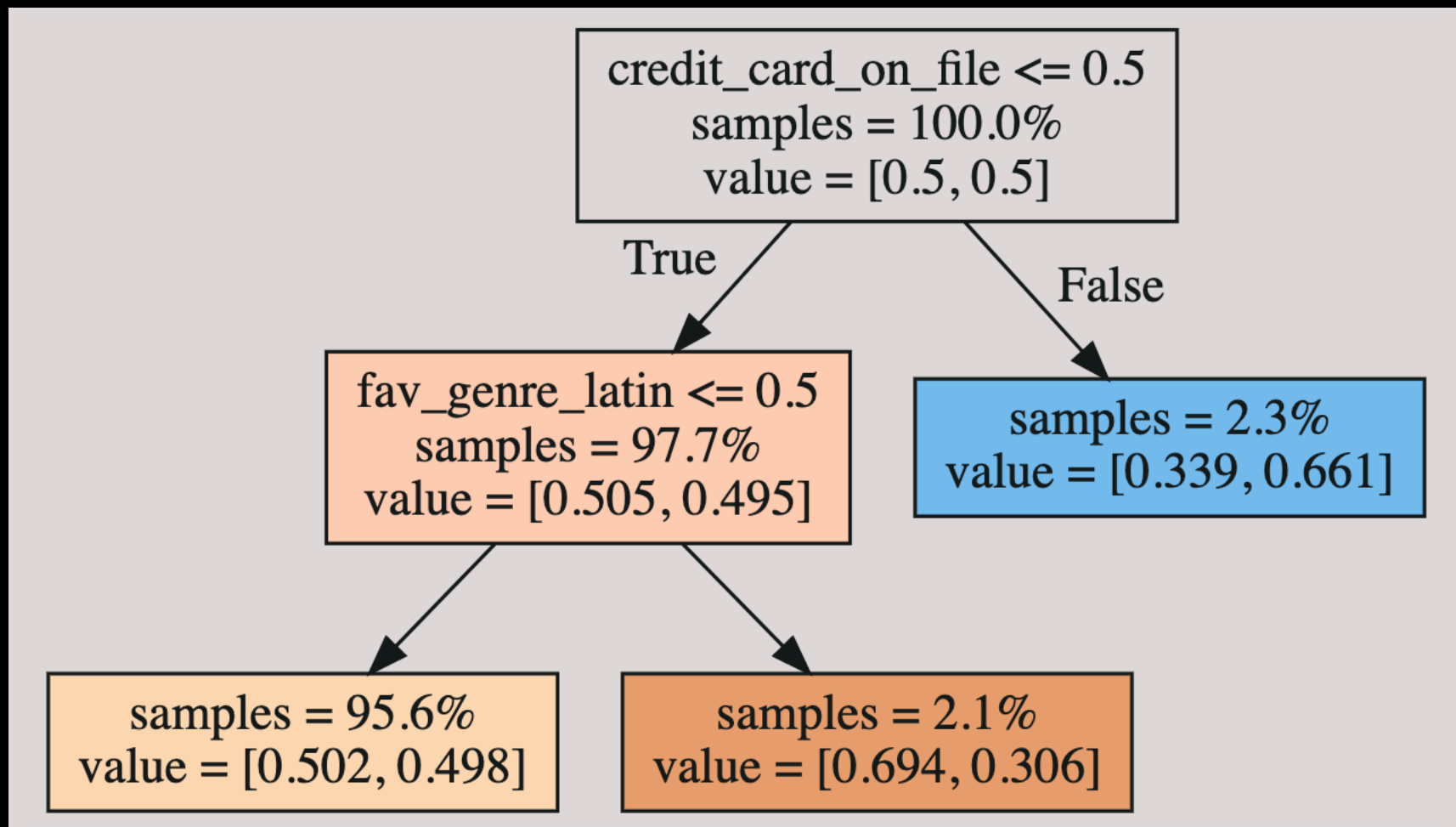
Trend by Click Date by Category





Overview of subscription conversion trend

Trend by Category





Overview of subscription conversion trend

Trend by Category

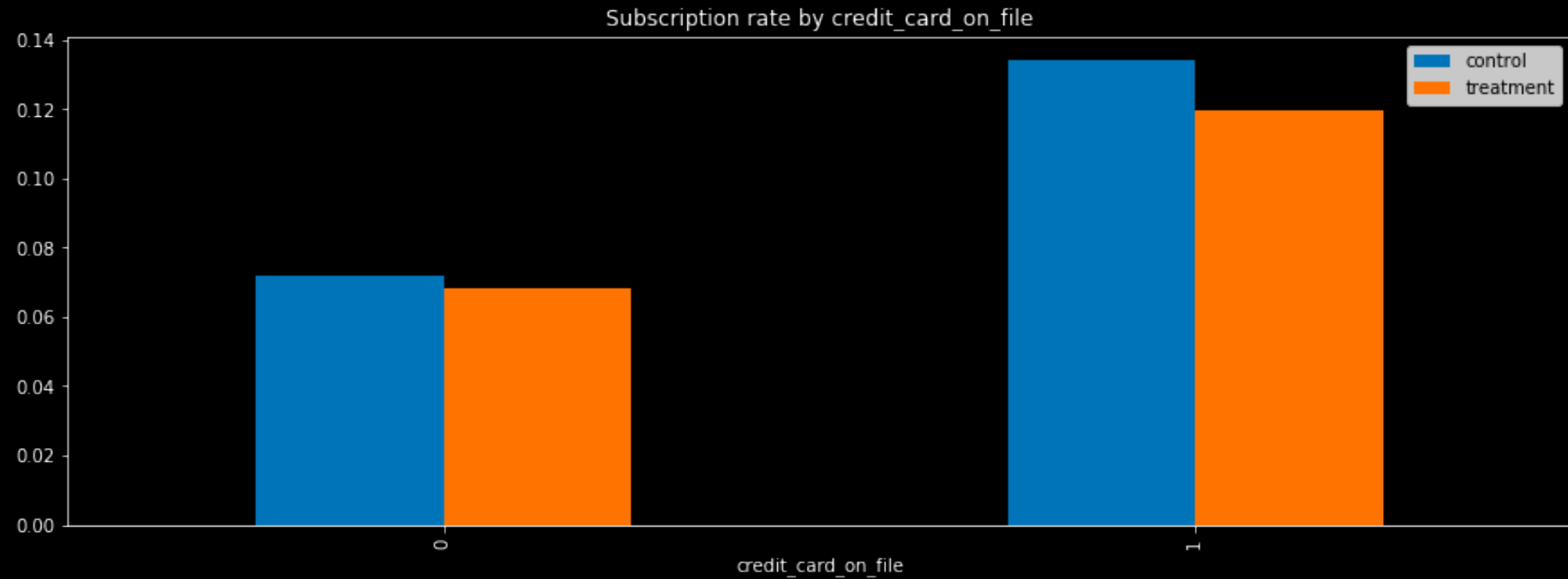
Feature Importance

Feature	Importance
credit_card_on_file	0.601663
customer_state_fl	0.473872
fav_genre_latin	0.398337
customer_state_mo	0.297252
urban_flag	0.135577
platform_desktop web	0.093299



Overview of subscription conversion trend

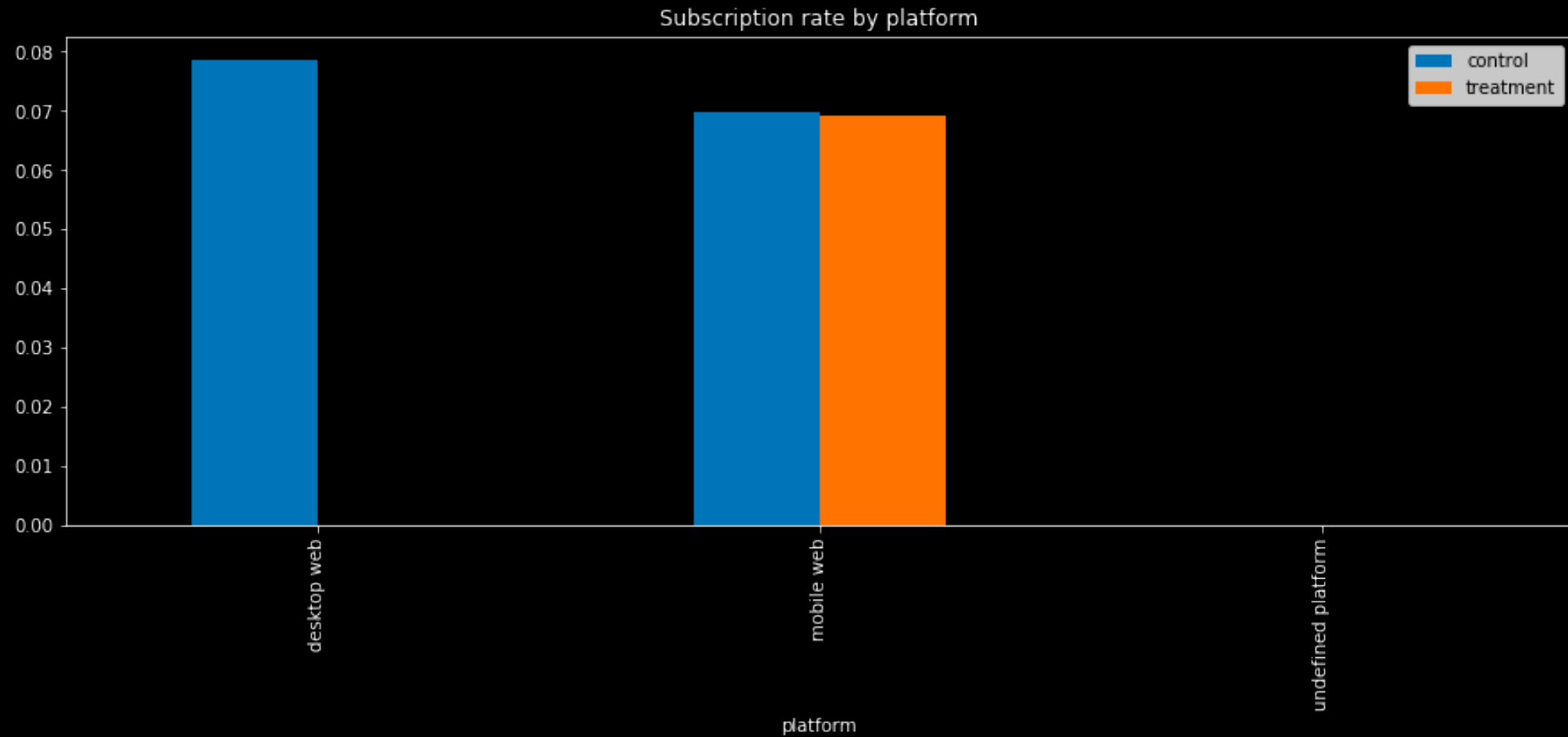
Trend by Category





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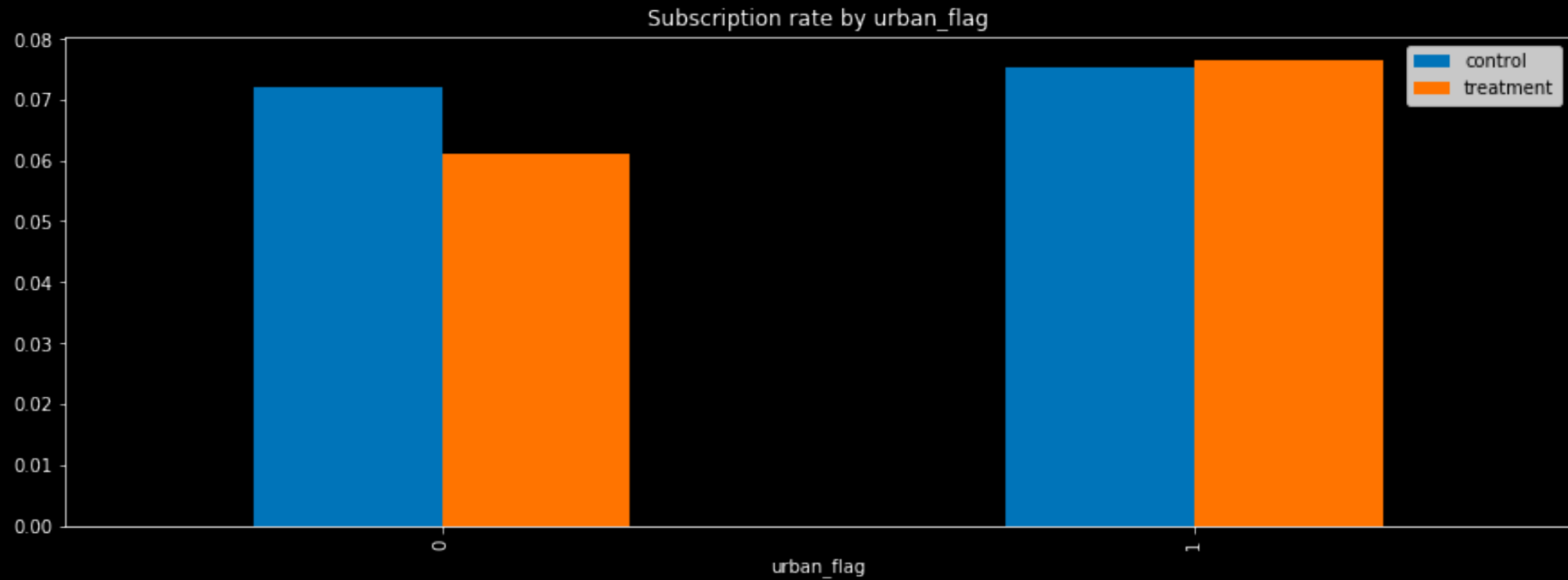
Trend by Category





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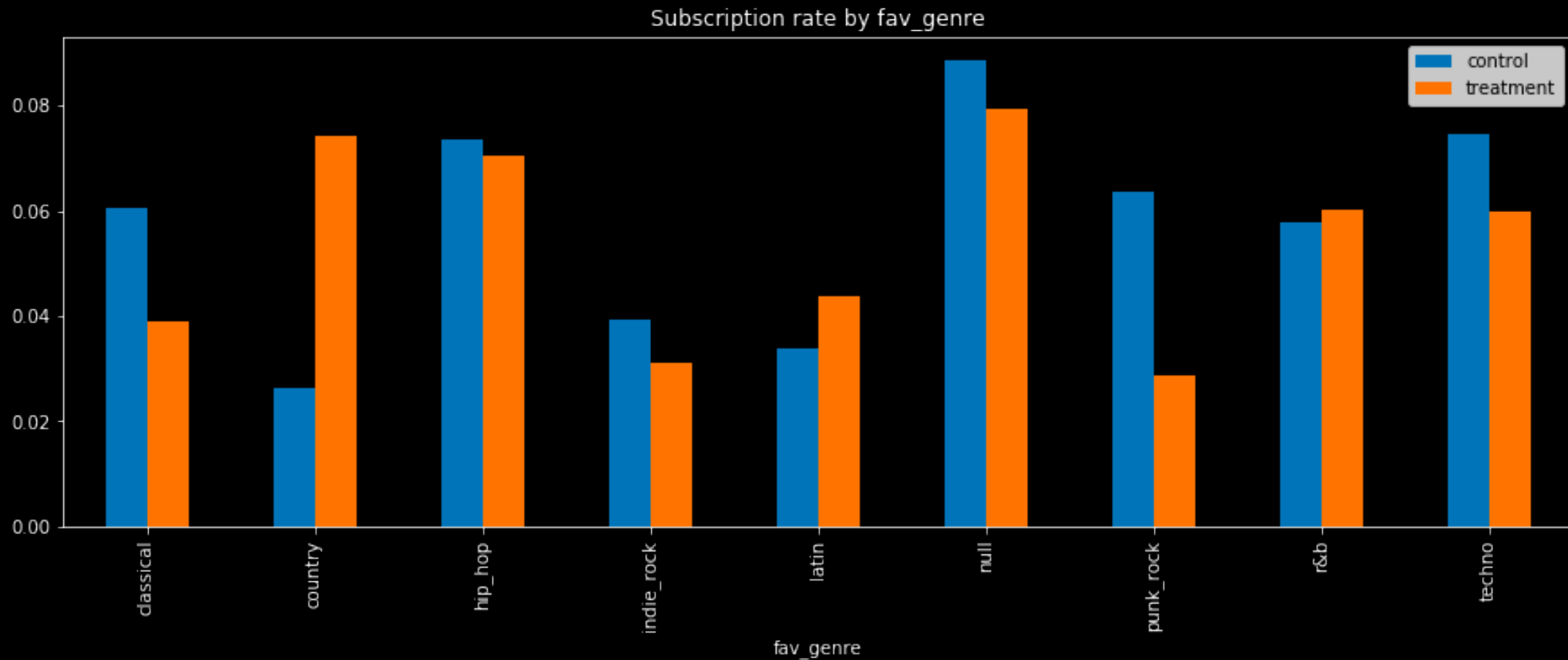
Trend by Category





Overview of subscription conversion trend

Trend by Category





Overview of subscription conversion trend

Trend by Category





A/B Test Result

- Sanity Check
- Sample Size Check
- Randomization Check



- Subscription Rate:
- Control Group: 6.968%
- Experiment Group: 6.928%



New feature converts less!



A/B Test Result

By Click Date

Click Date	Statistically significant	Control	Treatment	Treatment/Control	T-Subscriber	T-User
12/14/17	TRUE	8.77%	6.56%	74.80%	91	1388
12/19/17	TRUE	8.66%	6.32%	72.93%	89	1409
12/22/17	TRUE	6.77%	9.29%	137.25%	129	1389

By Customer State

Customer State	Statistically significant	Control	Treatment	Treatment/Control	T-Subscriber	T-User
id	TRUE	0	16.00%	inf	4	25
ri	TRUE	0	100.00%	inf	2	2

By Fav Genre

Fav Genre	Statistically significant	Control	Treatment	Treatment/Control	T-Subscriber	T-User
latin	TRUE	2.58%	4.38%	169.79%	35	800



Findings

- Overall trend:
 - Subscription rates around holidays are low.
 - With new feature, customers who like classical music subscribe after new year.
 - Positive impact: Urban users, Users who have credit card on file and Desktop users
 - Negative impact: State mo and state fl
-
- A/B test Result:
 - New feature does not help convert to subscription overall.
 - New feature increases subscription rate in state id but not enough data to conclude for ri.
 - New feature increases subscription rate for latin enthusiasts.



Recommendations for subscription growth

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Thank you