Agenda 1.0 optimize yield GAM

1. **Exploring Data Analysis of Ad Exchange Report for optimize yield**

2. **Using Bid-Range data to determine the right floor prices**

```
### Config ###


# Ad Exchange historical
Transaction types: Open auction
Pricing rules: Topcomment2_local
Countries: Thailand
```

1. Exploring Data Analysis of Ad Exchange Report for optimize yield

Pricing Rule: Topcomment2_local
last 30 days (Mar 6, 2019 - Apr 4, 2019)

(a.) Dimensions

Time
Days

Targeting
Ad locations
● **Branding types**

Buyers
Advertiser verticals
Ad requests

● **# Bid landscapes (* Floor price)**

Active view?

(b.) Metrics

numerical
● **Estimated revenue (THB)**
CPC (THB)
Clicks
Ad requests
Ad request eCPM (THB)
Ad impressions
● **Ad eCPM (THB)**
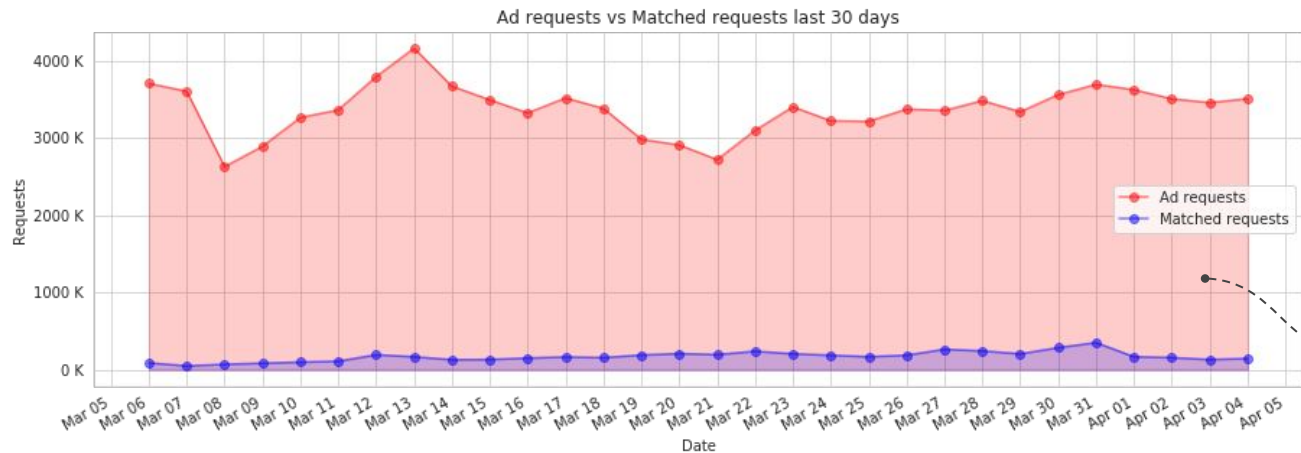Matched requests
Matched eCPM (THB)
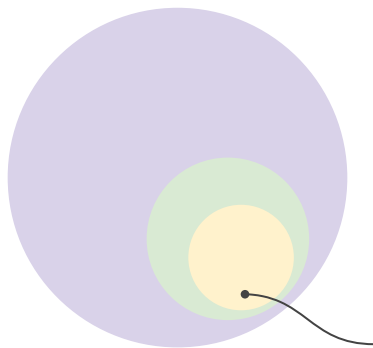
percent
Coverage
Ad request CTR
Ad CTR
CTR
Lift

Dimensions: #Time

Ad requests vs Matched requests last 30 days

Big Gap!
(% less Coverage)

last 30 days
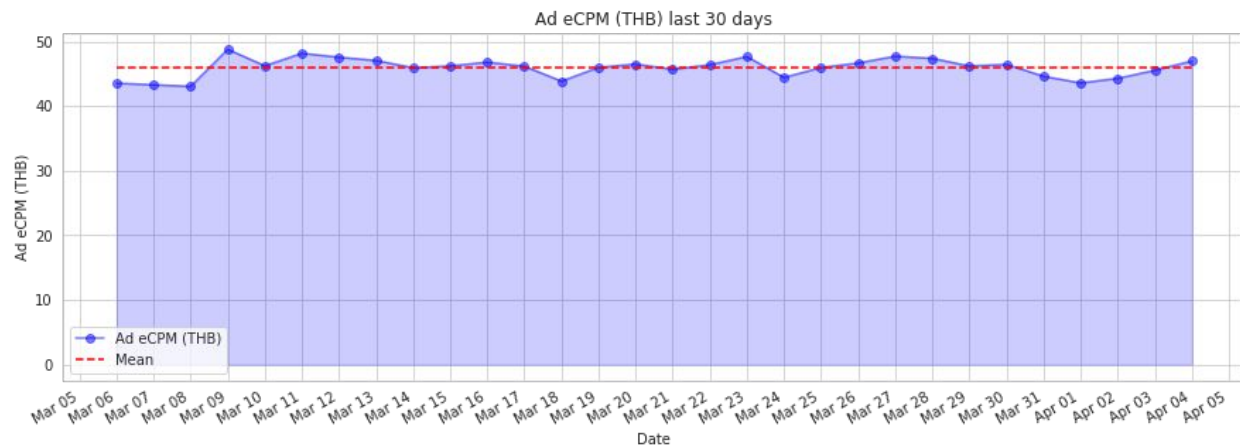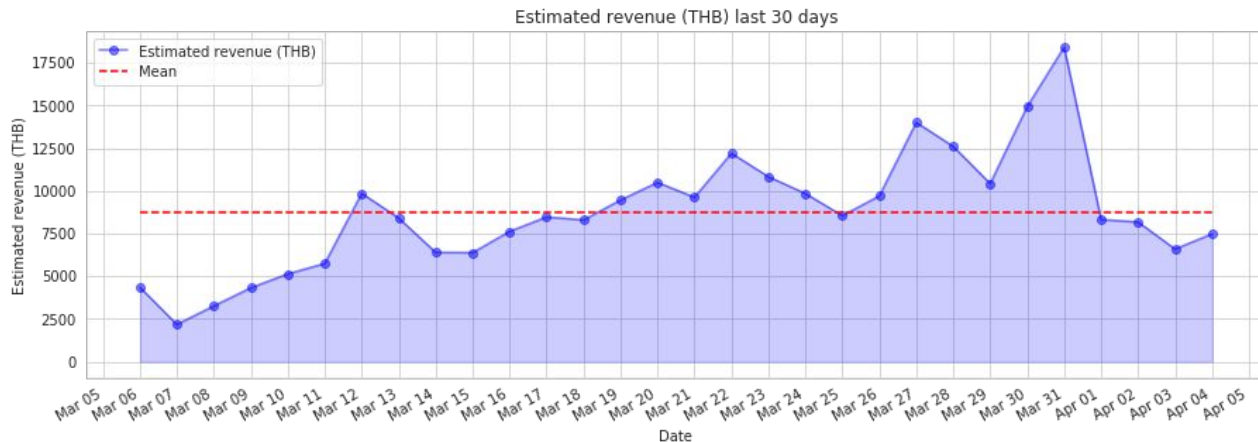
Ad Requests 100%

Matched Requests 5.03%

Ad Impressions 4.78%

CPM = Revenue per one thousand impressions

Estimated revenue (THB) last 30 days

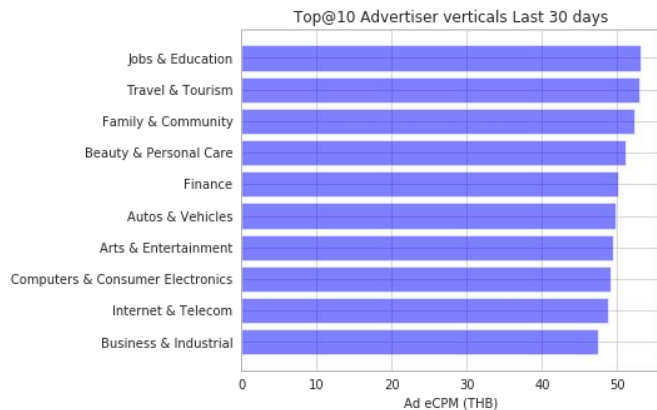Ad eCPM (THB) last 30 days

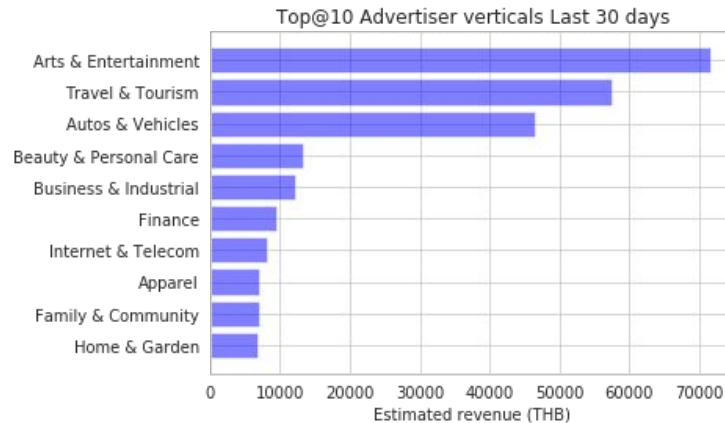Wednesday Trending ?

Calendar day effect
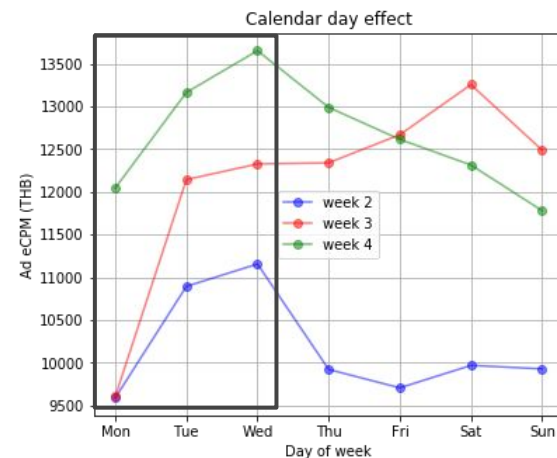
Dimensions: #Targeting, #Buyers

CPM = Revenue per one thousand impressions

A. Advertiser verticals (Ad eCPM)

Top@10 Advertiser verticals Last 30 days

B. Advertiser verticals (Estimated revenue)

Top@10 Advertiser verticals Last 30 days

C. Ad locations

By Ad locations Last 30 days

D. Targeting types

By Targeting types Last 30 days

Coverage vs Ad request eCPM vs Ad eCPM
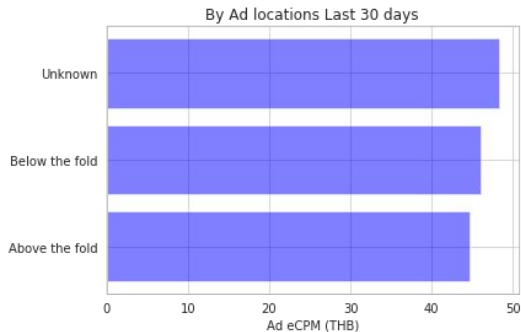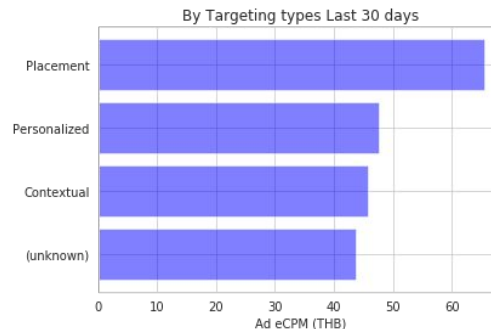
We can see clearly that a high coverage may not always yield you high revenue if the CPM is lower than optimum level and similarly a high CPM may not always yield a high revenue if coverage is lower than the optimum level. Continuously optimizing while balancing these two would give you better yields.

Correlation matrix

- Find relationship between two variables

2. Using Bid-Range data to determine the right floor prices

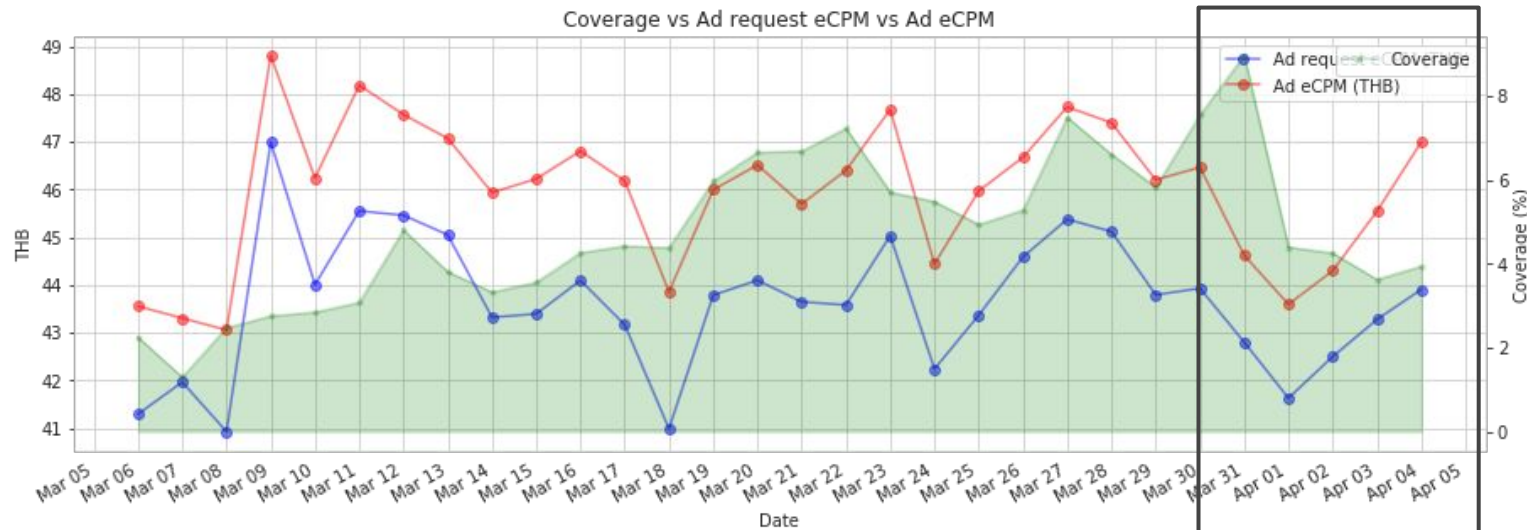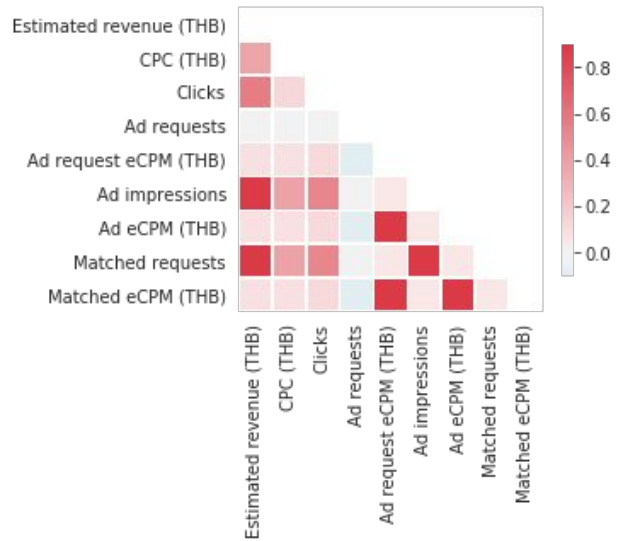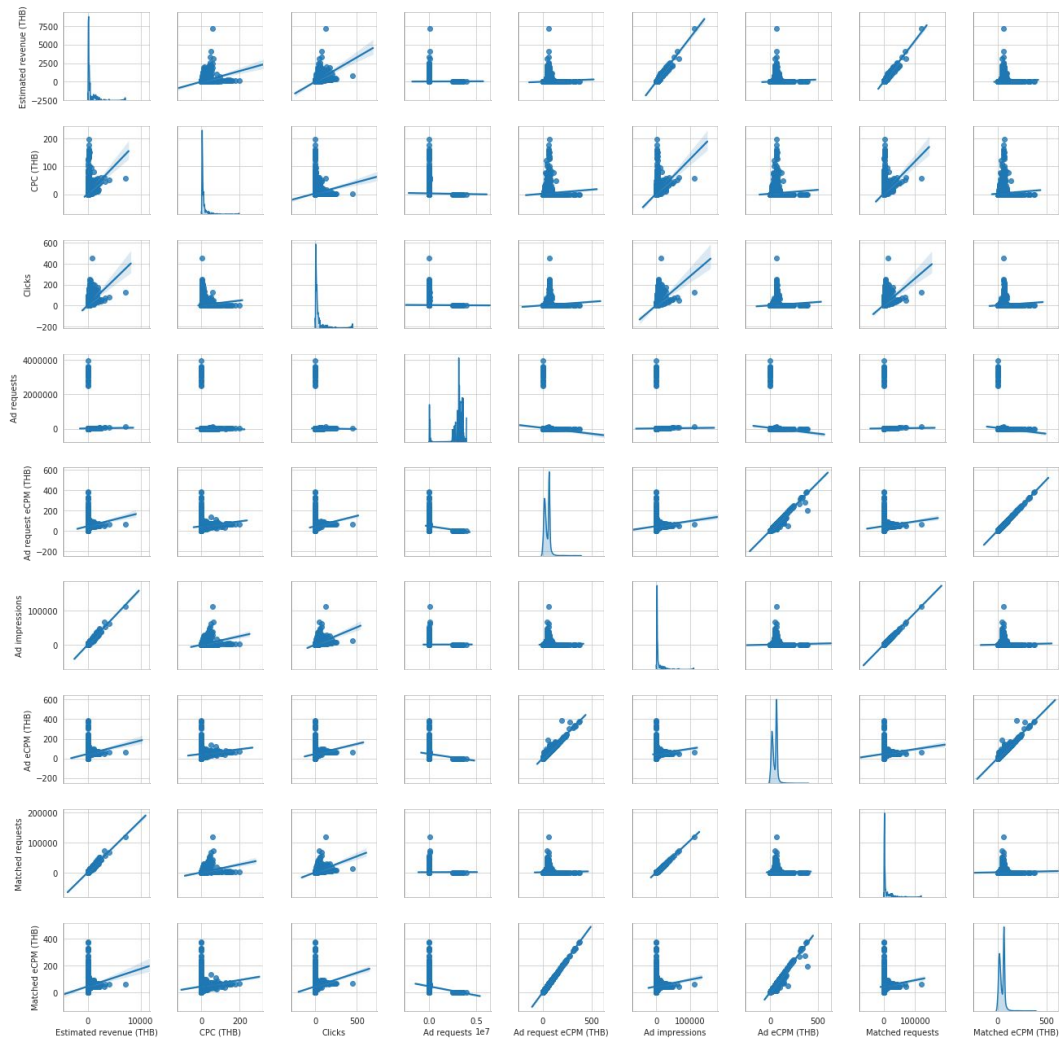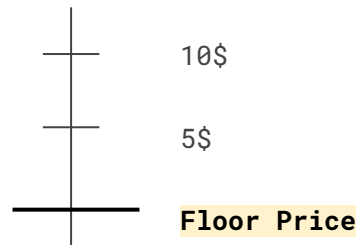a. Advertisers
b. Pricing Rules

Based on second price auction

Bid ranges (gross)	Advertisers	Bids	Average bid CPM	Estimated earnin	Impressions won	Winning bid CPM	Close CPM (THE	Win %
THB 111.78 - THB 114.97	TRUE	47	112.69	2.73	44	112.66	62.16	93.62%
THB 114.45 - THB 117.63	TRUE	15	116.13	0.7	12	116.14	58.38	80.00%
THB 114.97 - THB 118.17	TRUE	41	116.11	2.35	37	116.11	63.6	90.24%
THB 117.63 - THB 120.81	TRUE	11	119.32	0.72	11	119.32	65.23	100.00%
THB 118.17 - THB 121.36	TRUE	52	119.06	2.87	48	119.07	59.79	92.31%
THB 120.81 - THB 123.99	TRUE	14	122.85	0.76	13	122.87	58.8	92.86%
THB 121.36 - THB 124.55	TRUE	30	122.14	1.72	28	122.13	61.33	93.33%
THB 123.99 - THB 127.17	TRUE	11	125.95	0.64	11	125.95	58.34	100.00%
THB 124.55 - THB 127.75	TRUE	51	125.48	2.87	48	125.4	59.8	94.12%
THB 127.17 - THB 130.35	TRUE	12	129.07	0.57	9	128.91	63.76	75.00%
THB 127.75 - THB 130.94	TRUE	35	128.71	1.93	32	128.69	60.24	91.43%
THB 130.35 - THB 133.53	TRUE	11	132.37	0.64	11	132.37	57.93	100.00%
THB 130.94 - THB 134.13	TRUE	34	131.61	2.01	33	131.61	60.9	97.06%
THB 133.53 - THB 136.71	TRUE	17	135.36	0.89	16	135.39	55.78	94.12%
THB 134.13 - THB 137.33	TRUE	29	135.24	1.67	27	135.29	61.72	93.10%
THB 136.71 - THB 139.89	TRUE	10	138.9	0.38	8	139.11	47.8	80.00%
THB 137.33 - THB 140.52	TRUE	25	138.24	1.22	23	138.23	52.96	92.00%
THB 139.89 - THB 143.07	TRUE	9	141.48	0.57	9	141.48	63.68	100.00%
THB 140.52 - THB 143.72	TRUE	22	141.57	1.17	18	141.47	64.72	81.82%
THB 143.07 - THB 146.25	TRUE	14	144.8	0.93	14	144.8	66.4	100.00%

Concept

based on second price auction

Focus this case for **optimization**

Case A

10$

5$

Floor Price

Outcome 5$

* Case B

10$

Floor Price

5$
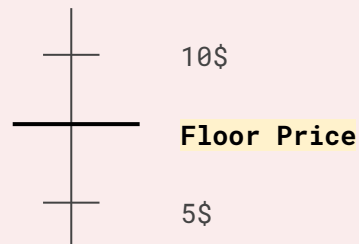
Outcome Floor Price

Case C

Floor Price

10$

5$
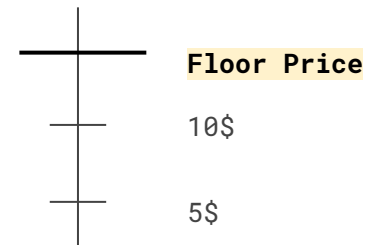
Outcome 0$

Agenda 2.0 optimize yield GAM

1. **Using Bid-Range data to determine the right floor prices**

`# Ad Exchange historical`

(a.) Dimensions

- # Bid landscapes
  (* Floor price)

(b.) Metrics

☑ Bid metrics ⓘ

☑ Bids DEPRECATED
☑ Average bid CPM (gross) DEPRECATED
☑ Estimated earnings from bids DEPRECATED
☑ Impressions won DEPRECATED
☑ Winning bid CPM (gross) DEPRECATED
☑ Close CPM DEPRECATED
☑ Win % DEPRECATED

☑ Active view metrics ⓘ

☑ Active view measurable
☑ Active view viewable
☑ Active view enabled impressions
☑ Active view measured impressions
☑ Active view viewed impressions
☑ Average viewable time (secs) BETA

Optimize yield

by GAM

Lower anonymous floor prices to $0.37 from $1.50 for rule Topcomment2_local	Projected coverage	Projected eCPM	Projected revenue lift	^
	15.2%	฿22.24	฿20.8K	
Display: Pricing rule > Topcomment2_local	+246.3% of original	-59.7% of original	+39.5% of original	

Floor price ?	Projected coverage	Projected eCPM	Projected revenue lift
● $0.37 (recommended)	15%	฿22.24	฿20.8K
○ $0.75	9%	฿36.65	฿18.3K
○ $0.90	8%	฿41.17	฿16.9K
○ $1.05	6%	฿46.53	฿9.84K
○ $1.20	6%	฿49.95	฿7.24K
○ $1.35	5%	฿53.01	฿3.39K
$1.50 (current)	4%	฿55.22	N/A

Low floor price

APPLY   EXPERIMENT   DISMISS

Optimize yield

by GAM

Lower branded floor prices to $0.50 from $2.00 for rule Topcomment2_local	Projected coverage	Projected eCPM	Projected revenue lift	^
	16.1%	**฿18.88**	**฿13.5K**	
Display: Pricing rule > Topcomment2_local	+267.6% of original	-65.8% of original	+25.6% of original	

Floor price ⑦	Projected coverage	Projected eCPM	Projected revenue lift
⦿ $0.50 (recommended)	16%	฿18.88	**฿13.5K**
○ $1.00	8%	฿34.06	฿6.87K
○ $1.20	6%	฿39.64	฿2.99K
$2.00 (current)	4%	฿55.22	N/A

`Low floor price`

APPLY   EXPERIMENT   DISMISS

based on second price auction
(Branded prices) last 30 days
Floor $2.00

Winning Bid vs Close CPM Revenue

90% Gap!

Winning bid CPM (gross) (THB) vs Close CPM (THB) vs Estimated earnings from bids (THB)

based on second price auction

Average bid CPM (gross) (THB) vs Estimated earnings from bids (THB)

Win % > 80 %

Q1

based on second price auction

Average bid CPM (gross) (THB) vs Estimated earnings from bids (THB)

Win % > 80 %
Average bid CPM (gross) (THB) < 400

Average bid CPM (gross) (THB) vs Estimated earnings from bids (THB) vs Win %

Peak Performance Q1 (Fine-Tuning Floor Price)

Bids: **7470**
Estimated earnings from bids (THB): **432.40**
Win %: **94.07 %**
Average bid CPM (gross) (THB): **136.09 (+- 5 %)**
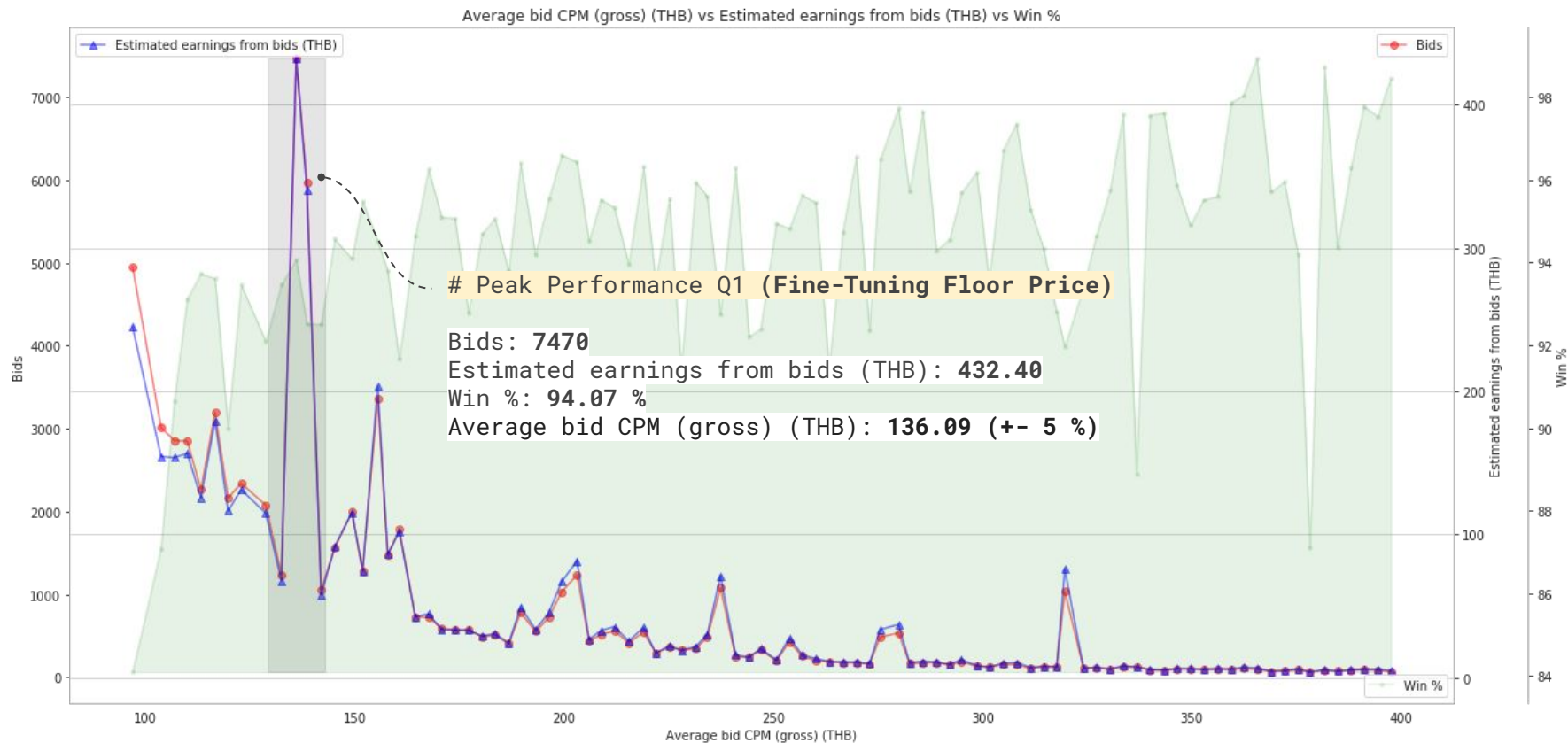
based on second price auction 7 days ago
(all branded top 5 advertisers) # Floor Price $2.00

THB 127.63 - THB 130.82

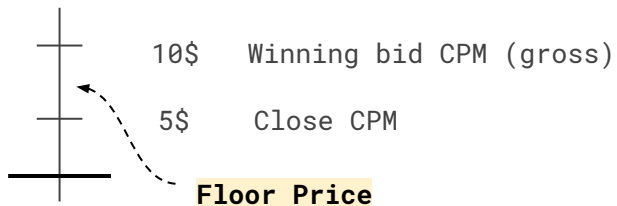| Advertisers	Winning bid CPM (gross) (THB)	Close CPM (THB)
Accor Group	130.73	63.82
Catcha Group	128.65	63.82
Huawei Technologies	128.40	63.82
Rocket Internet	130.73	63.82
Skyscanner	128.85	63.82

THB 130.82 - THB 134.02

Advertisers	Winning bid CPM (gross) (THB)	Close CPM (THB)
Accor Group	133.54	63.82
Aekyung Group	132.13	63.82
Air France-KLM Group	133.66	63.82
BCD Holdings	131.78	63.82
IAC	132.61	63.82

THB 134.02 - THB 137.21

Advertisers	\
JTB	
Krungsri Bank	
ONYX Hospitality Group	
Informations Systems Audit & Control Assoc, Inc	
BCD Holdings	

Winning bid CPM (gross) (THB)	Close CPM (THB)
136.15	63.82
134.21	63.82
134.30	64.84
135.77	108.62
136.27	63.82

Concept

based on second price auction

10$ Winning bid CPM (gross)

5$ Close CPM

Floor Price

* **Case B**

Focus this case for **optimization**

10$ Winning bid CPM (gross)

Floor Price

5$ Close CPM
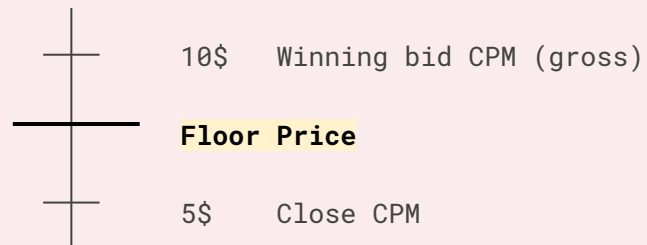
Opportunities

based on second price auction 30 days ago (**True**)

Winning Bid vs Close CPM Revenue

74% Gap!

Average bid CPM (gross) (THB) vs Estimated earnings from bids (THB) vs Win %

Peak Performance Q1 **(Fine-Tuning Floor Price)**

Bids: **114**
Estimated earnings from bids (THB): **6.55**
Win %: **94.74 %**
Average bid CPM (gross) (THB): **81.12 (+- 5 %)**
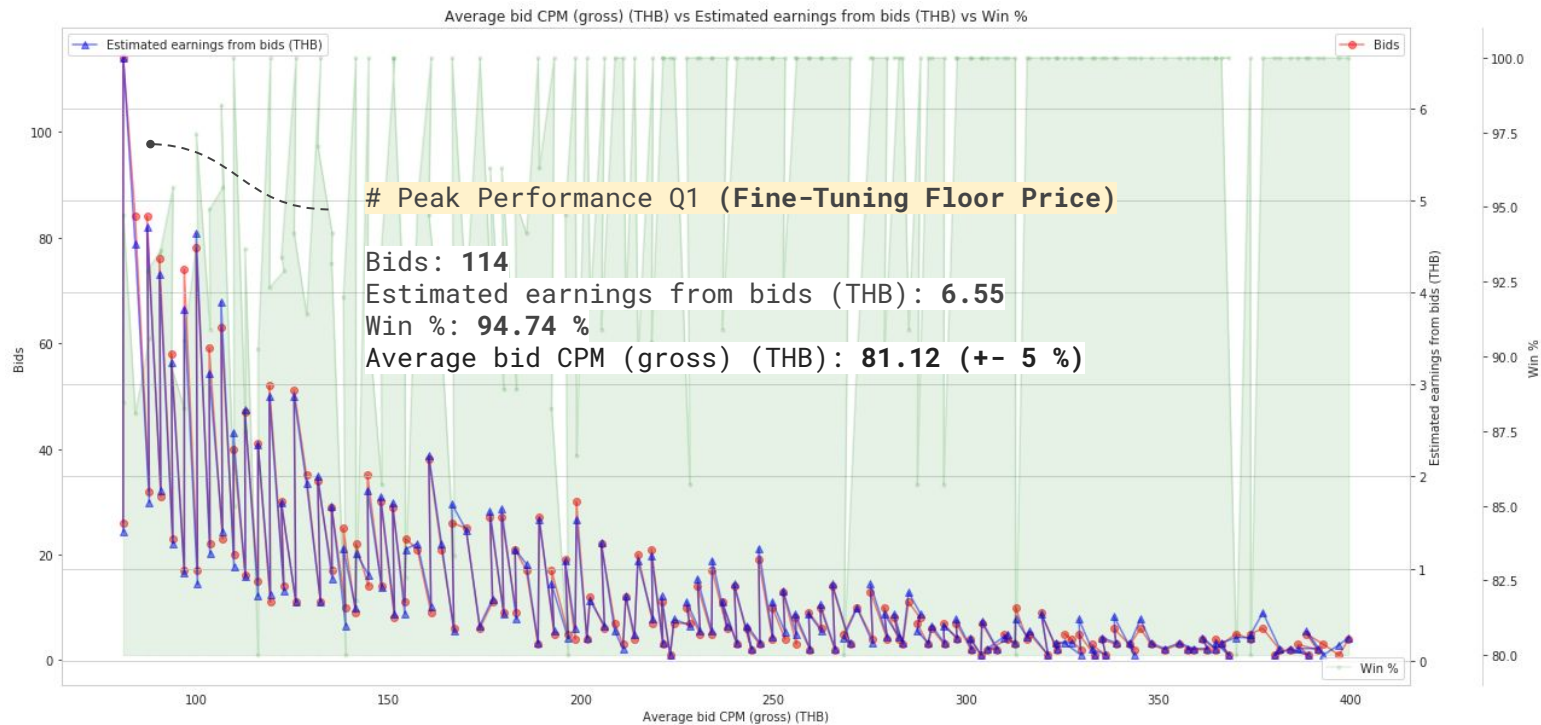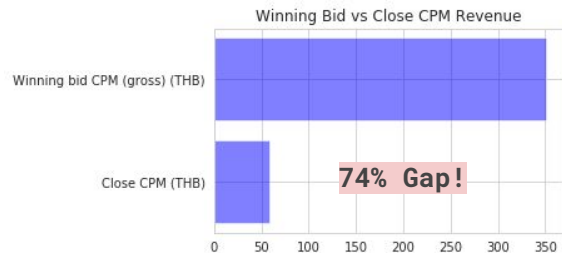
Opportunities

Open auction pricing rule: Topcomment2_local

Custom targeting ✓ All custom key-values

Rules for targeted inventory

⦿ Set pricing and blocking for everyone

◯ Set pricing and blocking for specific buyers, advertisers, or brands ⓘ

Any buyer, advertiser, or brand

Pricing and blocking ⓘ

⦿ Set floor prices
The lowest winning bid must be at least as high as the floor price

◯ Set target CPMs ⓘ
Floor prices are dynamic but average CPM over time targets the chosen CPM

Branded
◯ Blocked
⦿ Allowed $ 2.00

Semi-transparent
⦿ Blocked
◯ Allowed

Anonymous
◯ Blocked
⦿ Allowed $ 1.50

`Set floor price for specific advertisers`

Data

RTB Advertising (OpenRTB 3.0)   Real-time
Ad Exchanges   Historical

http://macroart.net/2013/06/doubleclick-for-publishers-dfp/

https://www.monetizemore.com/blog/ad-exchange-price-floors-optimization-tips/

Agenda 3.0 optimize yield GAM

1. **Find similarity of Advertiser verticals***

   Based on metrics last 7 days ago
(a)   Standard metrics
(b)   Active view metrics
~~(c)   Bid metrics (Buyers: Advertisers)~~

   *** Standardization, Cosine Similarity ***
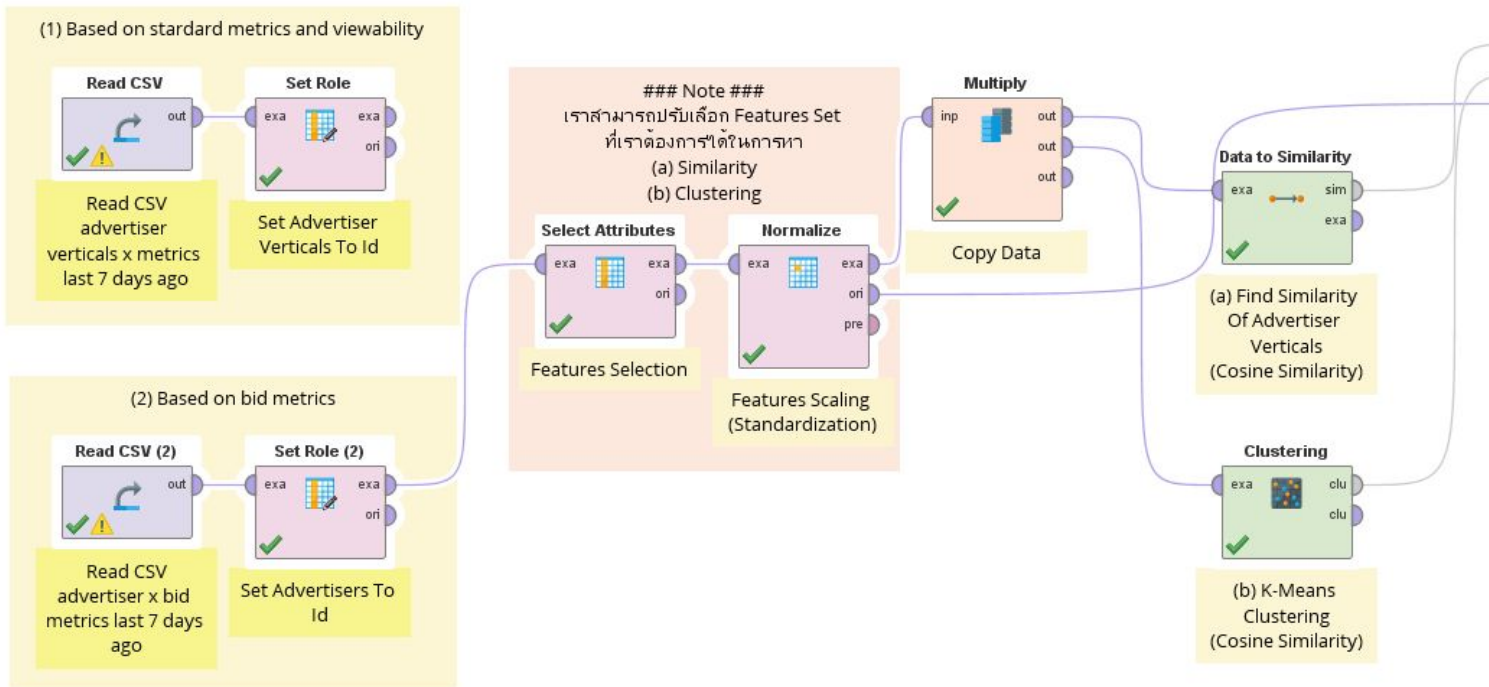
State Data

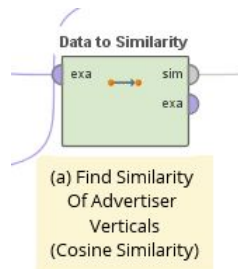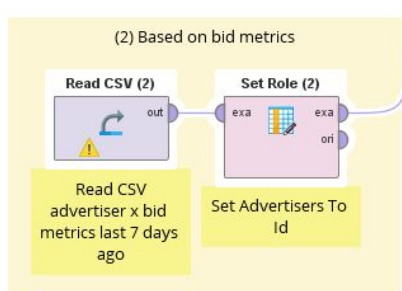`export to CSV as repository`

Queries

NEW QUERY

		Name	Most recent report run	Owner	Schedule	Date created ↑	
☐	☆	advertiser_verticals_similarity_last_7_days		Me	--	May 23, 2019 5:23 PM	RUN NOW
☐	☆	explore_dayofweek_last_6_months		Me	--	May 22, 2019 2:18 PM	RUN NOW
☐	☆	explore_viewability_last_7_days		Me	--	May 22, 2019 2:10 PM	RUN NOW
☐	☆	explore_bid_range_days_branded_last_1_months		Me	--	May 17, 2019 11:20 AM	RUN NOW
☐	☆	explore_bid_range_all_branded_last_7_days		Me	--	May 9, 2019 4:23 PM	RUN NOW

DELETE　　COPY　　REFRESH　　MODIFY COLUMNS　　Search　　GO

State Workflow

based on metrics of advertiser verticals:
(23 categories) last 7 days ago

State Result

(2) Based on bid metrics

Read CSV (2)

Read CSV advertiser x bid metrics last 7 days ago

Set Role (2)

Set Advertisers To Id

Row No.	Advertisers	Bids	Average bid ...	Estimated e...	Impressions...	Winning bid ...	Close CPM (...	Win %
1	Dnata Travel ...	10	213.540	0.590	10	213.540	58.640	1
2	21st Century ...	299	322.230	13.380	296	322.710	45.210	0.990
3	AARP	51	110.900	3.010	49	111.260	61.440	0.960
4	Accor Group	1957	49.360	12.980	157	173.870	82.660	0.080
5	Ad Counsil	416	99.320	22.400	362	99.320	61.890	0.870
6	Adobe Syste...	43	14.970	0.060	1	95.690	63.690	0.020
7	Aerolineas Ar...	2	2641.870	2.360	2	2641.870	1181.790	1
8	Air France-KL...	252	263.580	15.420	208	287.270	74.140	0.830
9	Air New Zeal...	5	17.530	0	0	0	0	0
10	Al Habtoor M...	5	87.890	0	0	0	0	0

Data to Similarity

(a) Find Similarity Of Advertiser Verticals (Cosine Similarity)

First	Second	Similarity
IKEA	Terranea	-0.611
IKEA	The Economist Group	0.998
IKEA	The Walt Disney Company	-0.654
IKEA	Travelclick	-0.762
IKEA	traveloka.com	-0.799
IKEA	TripAdvisor Group	-0.749
IKEA	TUI Group	-0.589
IKEA	Tune Group	0.072
IKEA	Unclassified advertisers	-0.182
IKEA	Universo Online	0.956
IKEA	Viceroy Hotels	-0.592
IKEA	windsorcourthotel	-0.601
IKEA	www.indexlivingmall.com	0.877