## Notes on the use of materials

Please read before using the materials and use them only if you agree to the terms of use.

\*The instruction does not cover the specifications of this service. The contents of the instruction manual are subject to change without notice due to changes in the specifications of this service.

\*No part of the instruction manual may be reproduced, modified, or disclosed to any third party without our permission, except for personal, non-commercial use or other use permitted by law. You may not use the manual for the purpose of developing a product that competes with the service.You may not use the information for the purpose of developing a product that competes with the Service.





Registered trademark applied for (in Japan)





datacompany.jp

You can see the effectiveness of offline and digital advertising, optimal budget, business KPIs after optimization, and more in about 10 minutes!



Screenshots are under development. Actual specifications may differ. Specifications are subject to change without notice. Dummy data. About 10 minutes is the average time required for dummy data (2 years, 730 records, 8 media). Reproduction is not guaranteed.

### Just upload CSV to the cloud! Intuitive Google Looker Studio for reporting.



**Google Cloud** 



Please refrain from using RPA or automated software to upload CSV. For details, please refer to the Terms of Use.

### Automatic email notification of analysis completion. Upload CSV to the cloud and you can have your MMM in about 10 minutes!

#### Analysis completed.

Analysis failed, is the CSV filename XXX? The IMP file is...



The analysis has been completed, but the optimization process has not converged properly. The derivative is Positive. Please consider data improvement. For example...

Please contact support. Postoptimization index exceeds standard values.

Advice provided is our trade secret. Please refrain from disclosing such information to third parties without our prior consent. For details, please refer to the Terms of Use

Data scientists will support you and provide advice based on the results of the automated email. For example, advice on creating analytical data.

> Analysis is complete, but optimization does not seem to be working. Of the submitted media, those that fall into the XXX and YYY categories...

I got a message like this: "The derivative is...". What should I do?

The CSV file name seems to be the cause. Thus...

I cannot create the CSV correctly!

The advice and other information we provide is our trade secret. Please refrain from disclosing such information to third parties without our prior consent. Please refer to the Terms of Use. In principle, support will be provided via email, etc. There is no SLA for support too. Support resources will be allocated according to the number of contracted accounts company

#### Adopted open source Google LightweightMMM Models. Transparent and open reporting based on public code.

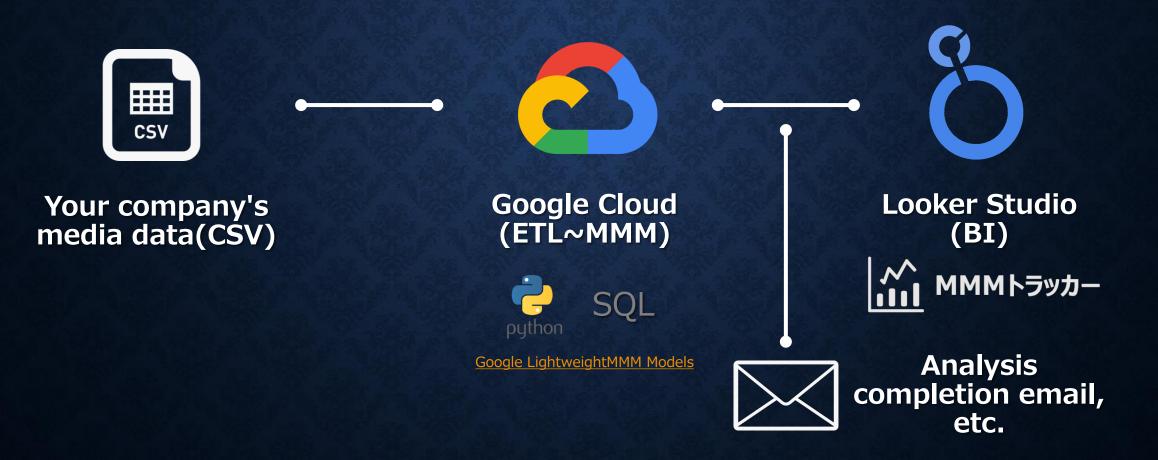
Model							
Train 学習							
Indicator +	mean	std	median	_5per	_95per	n_eff	r_ha
ad_effect_retention_rate[CRITEO_RTG]							
ad_effect_retention_rate[GDN_RTG]							
ad_effect_retention_rate[GOOGLE_SEA							
ad_effect_retention_rate[NEWSPAPER]			- /		_		
ad_effect_retention_rate[TVCM]					I.		
ad_effect_retention_rate[YAHOO_SEAR							
ad_effect_retention_rate[YDA_RTG]							
ad_effect_retention_rate[YOUTUBE]					1		
coef_media[CRITEO_RTG]							
coef_media[GDN_RTG]							

#### Google LightweightMMM Models functionality is publicly available.

Google LightweightMMM Models

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Open source use streamlines model exploration. Standard analysis accuracy at an unbeatable price and speed.



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## Main libraries used.

category	library	use					
pretreatm ent	CustomScaler	Standardize data. Aligns the scales of different media and converts them to the same scale. Assesses each media more equitably and stabilizes learning.					
	LightweightMMM	MMM wrapper.					
	carryover	Specify a carryover model, e.g. ad_effect_retention_rate, to be calculated for each media.					
	fit	Specify training conditions. Initializes the model and specifies various conditions. Default prior distribution.					
model	get_posterior_metrics	Calculate media contributions, etc.					
	print_summary	Evaluate the model. It also visualizes the status of optimization for each media.					
	predict	The model predicts.					
	find_optimal_budgets	Optimize your budget.					
other	variance_inflation_factor r2_score ,etc	Evaluates multicollinearity and model accuracy. We provide this information as a reference for media data adjustment and model accuracy; Google LightweightMMMM Models does not reflect these in its training and does not have an MMMトラッカー.					

The Plot function is not used in LookerStudio due to restrictions such as the inability to export numerical values to spreadsheets and other formats. For those functions that can be reproduced, the same results as the Plot function are obtained by using the function from which the Plot function is referenced.GEO and external factors are not supported. Please note that we may stop, suspend, or change the service due to changes or stoppage of open source. Please see our Terms of Use for details.

#### US\$500 per month. No initial cost. Unlimited number of reports. Free 14-day trial with no credit card required.



Only one free trial is available per company. Free trials are not available for companies that have a history of paid plan subscriptions in the past. There is no automatic transfer to a paid plan after the trial ends. If you wish to transfer to a paid plan, a separate application is required. Please refrain from using RPA or automated software to upload CSV. For details, please refer to the Terms of Use.

## What is MMM Marketing Mix Modeling?

#### **Optimize marketing budget allocation**



This method optimizes budget allocation by quantitatively analyzing how multiple marketing initiatives, such as TV commercials, digital advertising, and promotions, affect sales and profits.

Unlike existing methods, this method uses cross-media analysis to evaluate and optimize budget allocation in a fair and objective manner.

It has attracted attention in recent years due to the difficulty of tracking advertising effectiveness due to third-party cookie regulations, etc.

### MMM トラッカー, with its unbeatable price and speed, allows you to review your ad operations at any time at a low cost!



MMM is very expensive.Want to keep costs as low as possible... I want to try different media for analysis according to my action plan...



MMM takes a month to deliver. We want to keep our ad operations up-todate with the latest data at high speed... I want to know the key points of MMM immediately, such as media contribution and budget optimization...

#### MMMトラッカー is designed with these needs in mind

This is not based on interviews with users of other companies' services.

#### **Output image**

# List main indicators before and after optimization.

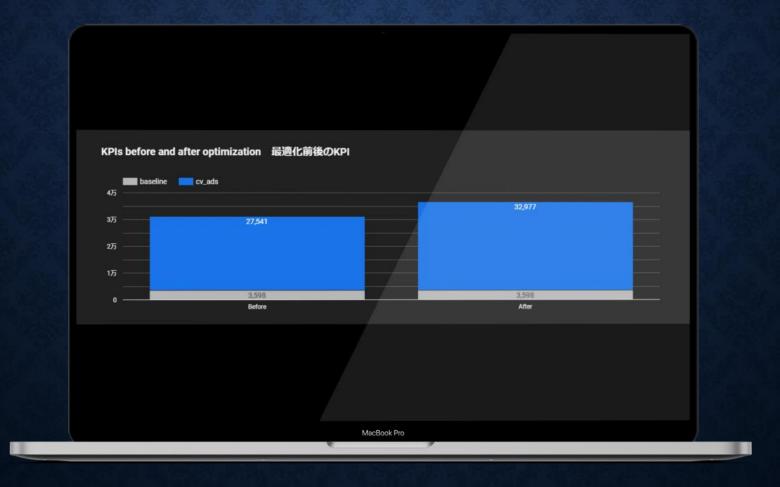


Screenshots are under development. Actual specifications may differ. Specifications are subject to change without notice. Dummy data.

#### Optimize each media budget.



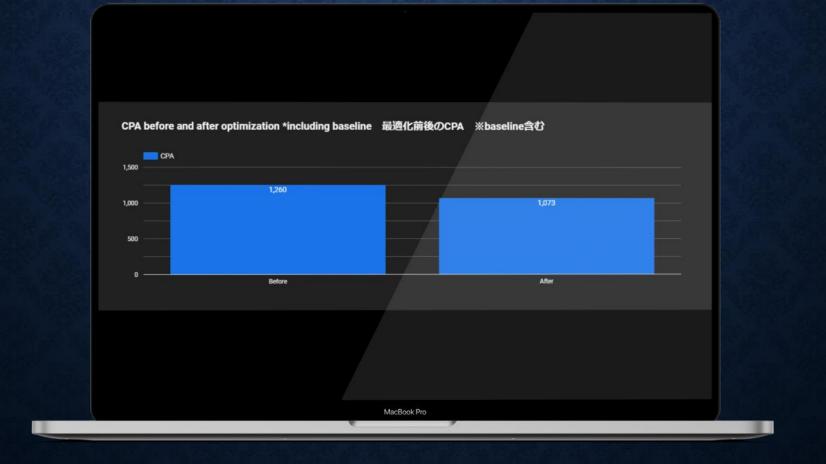
### Predicting the effects of optimization.



Screenshots are under development. Actual specifications may differ. Specifications are subject to change without notice. Dummy data.KPIs other than CV are also possible acompany of the second secon

**Output image** 

# Evaluate the effectiveness of optimization in terms of cost efficiency.



Screenshots are under development. Actual specifications may differ. Specifications are subject to change without notice. Dummy data.

### Check the contribution of each media.



Screenshots are under development. Actual specifications may differ. Specifications are subject to change without notice. Dummy data.

#### Model accuracy is also intuitive.



Screenshots are under development. Actual specifications may differ. Specifications are subject to change without notice. Dummy data.

#### Notification of non-optimization.



Screenshots are under development. Actual specifications may differ. Specifications are subject to change without notice. Dummy data. The r\_hat threshold is 1 3 2024 datacompany.

#### **Output image**

#### Good basic information on the data.



Screenshots are under development. Actual specifications may differ. Specifications are subject to change without notice. Dummy data.

### All you need to do is to prepare 3 CSV files! Formats are available.

1 DAT	A	В	C C	D	E	F	G	H		1
DAT		outube	Google_SEARCH	-	-	GDN_RTG	Criteo_RTG	TVCM	NewsPaper	
2	2022/9/1	3666.788797								
3	2022/9/2	2617.056837		100000000000000000000000000000000000000						
4	2022/9/3	4928.645844		4447.18722						
5	2022/9/4	271.6742123								
6	2022/9/5	5880.004634								
$\frac{\pi}{2}$	2022/9/6	9911.686261								
8	2022/9/7	1422.493687		1335.234334						
9	2022/9/8	5467.102793								
10	2022/9/9	5858.647885								
11	2022/9/10	5150.056597								
12	2022/9/11	861.3213906	3364.017031	8958.254572						
13	2022/9/12	6364.013702	3091.286644	562.4891959	773.8211045	6525.261012	8453.136341	10298.8487	1831.802209	
14	2022/9/13	8258.167506	4021.426251	1417.568542	9665.607332	8626.951474	2250.638545	12269.50536	13314.14685	
15	2022/9/14	3546.66205	4838.493074	6057.297174	10837.37214	4340.718354	11405.39407	9177.465302	5975.327122	
16	2022/9/15	7671.882889	5758.507444	4421.24005	8157.571022	7102.035297	12231.4796	14761.25204	12292.37462	
17	2022/9/16	5887.315221	3429.402666	4128.628987	2641.900184	8369.53316	10665.17468	5798.107602	8180.407395	
18	2022/9/17	4593.436556	5122.736734	606.1168867	6097.324216	8930.410496	12999.77746	9616.291554	4986.446666	
19	2022/9/18	4196.000624	4271.672144	2725.040885	9851.999436	692.3896394	201.5088408	1741.089608	736.0422723	
20	2022/9/19	4007.630609	1862.882951	6156.043644	2365.065696	4602.659443	12064.99869	14191.73193	5972.94906	
25	2022 (0 (20	0750 401005	10000 50005	0000 71000	10100 54001	0000 400700	1101 440000	F702.00200	1120 550225	

IMP File Number of deliveries by media

COST file Cost by media

CV File Number of CVs, requests for information, and other targets

Please prepare your daily data and we will assist you in properly preparing your CSV. Dummy data.

## Subscription payment by Stripe is available for free trial with no credit card required.



https://stripe.com/



There is no automatic transfer to a paid plan after the trial ends. If you wish to move to a paid plan, you will need to apply separately. The trial is designed to provide a safe and secure experience.

## Q Can I use a Google account other than the one I signed up for?

A As a general rule, only the account of the applicant at the time of application will be accepted.Please refrain from lending or sharing your account.Please see Terms of Use for more information.

## Q Do I need to pay anything other than US\$500 per month?

A No fees other than US\$500 are required unless customized.Examples of customization include the following.Please contact us for more information.

• Modifying the default settings (pre-distribution, number\_warmup, etc.) of Google LightweightMMM Models , adding accounts, etc.

#### **Q** Can I analyze data commissioned by other companies?

A In the case of a consignment from a group company, etc., please purchase the number of consigned companies. The quantity can be specified on the purchase s creen. In the case of outsourcing from other companies for advertising management, consulting, etc., please purchase the quantity of the number of outsourced companies. If you wish to analyze data from both your company and other companies, please purchase the quantity for the total number of companies. A dedicated, closed cloud environment is provided per contract and per account. In order to provide the best Google Cloud environment, MMM, advice, etc., we will confirm the analysis data and purpose of use at the time of purchase. Please declare the purpose of use correctly. Use of the site for any unauthorized purpose is prohibited. We may suspend your account if we find that you are using the site in a manner different from what is expected. Please see Terms of Use for details.

#### Q Can I always do MMM in 10 minutes?

A Approximately 10 minutes is the average time required for dummy data (2 years 730 records 8 media).Reproduction is not guaranteed.Before using this service, you can test with dummy data and then with production data.)

#### **Q** What data do I need to prepare for MMM?

A Please prepare daily media data, CVs, etc.There are certain conditions.Please contact us or see the user manual for details.

#### **Q** What is the maximum amount of data that can be MMM?

A For example, with the default settings, we have tested the operation of up to 9 media with 2 years (730 records) of data. 10 columns or less, including DATE.

Consider integrating media with small budget ratios or similar ad menus; if the VIF section of the MMMトラッカー has media with a VIF value greater than 10, that media is similar to other media.Please consider it a priority.Also avoid data that looks like it was generated by a random function.

We have confirmed that up to 13 media can be used by adjusting parameters and other customizations, but this number may not always be increased depending on the nature of the data. In principle, customization is available for a fee. Please contact us for details.

- Q Can I change the parameters of Google LightweightMMM Models?
- A We will accept changes from the default values for prior distribution, number\_warmup, etc., but we do not guarantee convergence of the optimization process.In principle, customization is available for a fee.Please contact us for details.

- Q Do you do MMM with generative AI?
- A Generated AI is not used. We use <u>Google LightweightMMM Models</u>.

#### **Q** Is support always available?

A Upload the CSV to the cloud and you will receive an automatic email notification of the completion of the analysis.Expert advice on abnormal analysis termination, differential Positive, etc. will also be automatically delivered according to the analysis results.Based on the results of the automatic e-mail distribution, we will provide advice from the creation of analysis data if requested, but as a rule, support will be provided by e-mail or other means.There is no SLA for support too.Resources are generally allocated according to the number of contracted accounts.The advice and other information we provide is our trade secret.Please refrain from disclosing such information to third parties without our prior consent.Please see Terms of Use for details.

https://datacompany.jp/mmm/

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#### From data to Insight and Business

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