#### 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.





#### MMM MARKETING MIX MODELING SUBSCRIBED AUTOMATED REPORTING



datacompany, Inc.

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



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





## 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.

# 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!



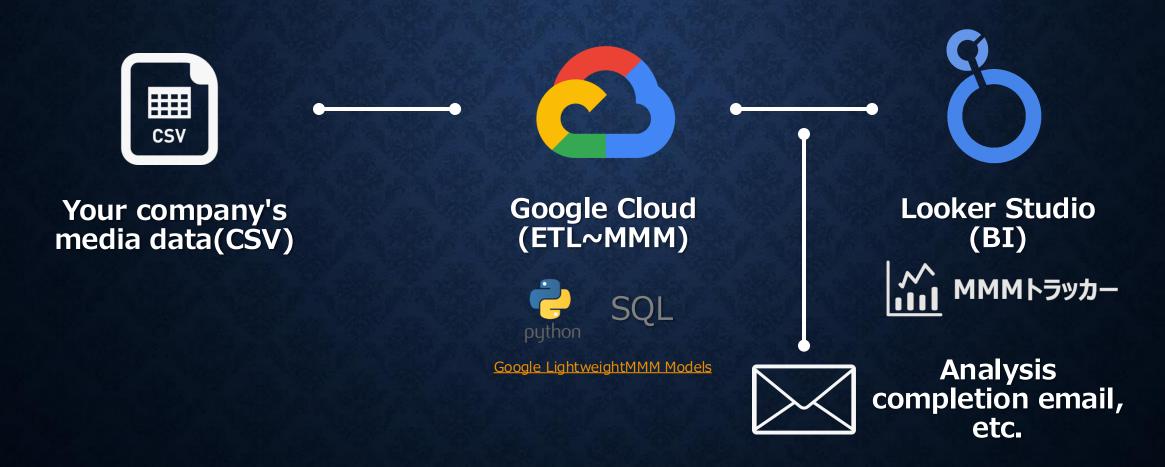
#### Adopted open source Google LightweightMMM Models. Transparent and open reporting based on public code.



Google LightweightMMM Models functionality is publicly available.

Google LightweightMMM Models

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



#### Main libraries used.

| category         | library                                    | use  |
|------------------|--|--|
| pretreatm<br>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.  |
| model            | 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.   |
|                  | 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<br>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.



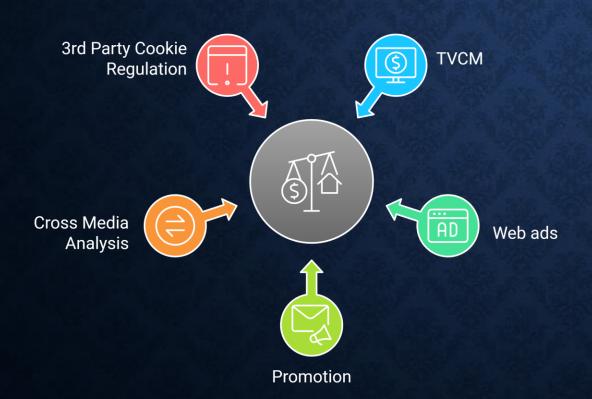
# us\$500 permonth

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-to-date 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

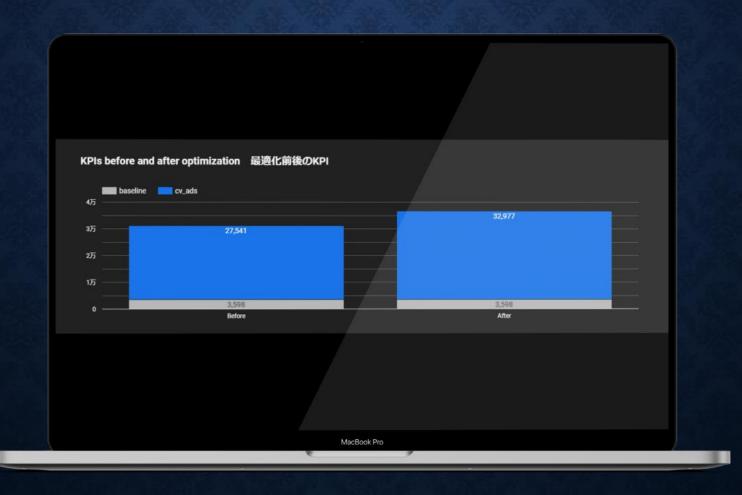
### List main indicators before and after optimization.



#### Optimize each media budget.



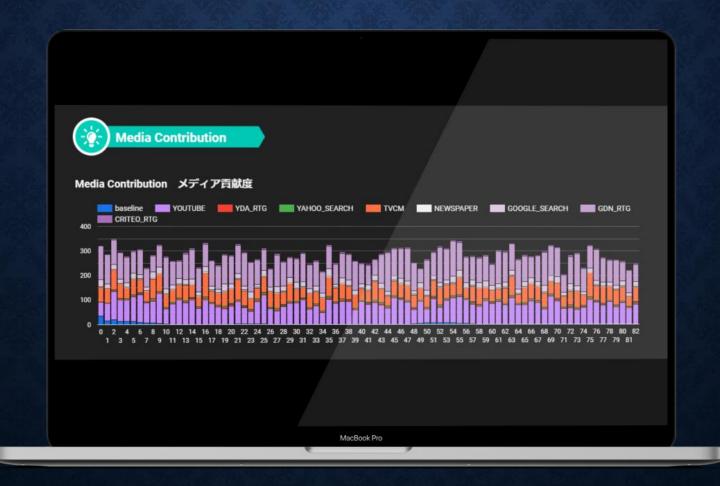
#### Predicting the effects of optimization.



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



#### Check the contribution of each media.



#### Model accuracy is also intuitive.



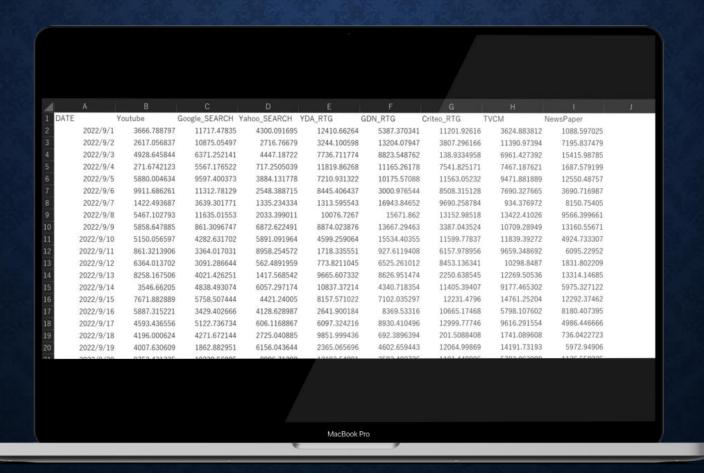
#### Notification of non-optimization.



#### Good basic information on the data.



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



IMP File Number of deliveries by media

COST file Cost by media

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

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



















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.

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From data to Insight and Business

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