

Generate Higher Conversions

AdWords Spend Optimizer™ uses data science
to deliver results

Google
AdWords



Perceptive**Analytics**

Data Analytics | Spreadsheet Modeling

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AdWords Spend Optimization

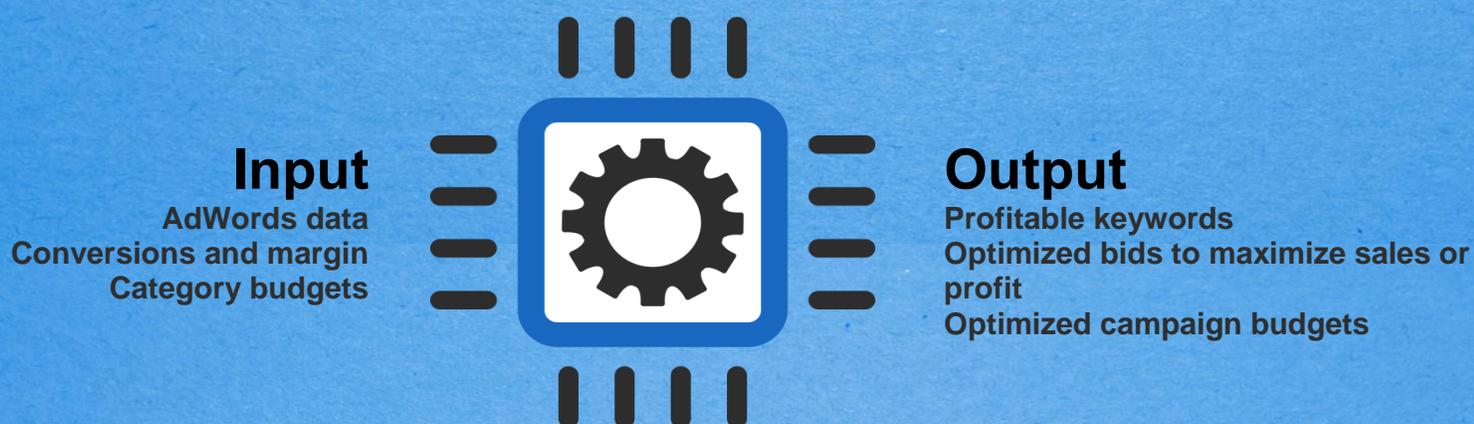
30%+ of AdWords budget can get wasted

Where is budget getting wasted?

Which keywords are profitable?

Which campaigns need more budget?

AdWords Spend Optimizer™



fx

Keyword Optimizer

$$\sum_k x_k \lambda_k CTR(b_k)$$

fx

Profit Optimizer

$$\sum_k \alpha_k (1 - e^{\beta_k b_k}) CR_k (Profit_k - b_k)$$



Continuous Improvement

Benefits of AdWords Spend Optimizer



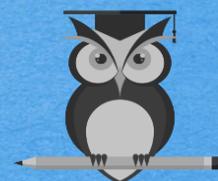
Allocate budget optimally



Grow business



Gain competitive advantage



No data science expertise needed

Search Engine Marketing is Great! But You Can End Up Spending Too Much!

In a budget constrained world, it is important for advertisers to deliver their marketing messages or generate revenue in a cost effective manner. Using SEA, you can reach out to prospects far away, precisely at the time when they are likely to buy your products / services. Search engine advertising also provides far more tracking letting you know when, where, and for which search have your customers purchased the product.

Frequent Bid and Budget Changes Make Optimization Necessary

For marketers, it's a challenge to pick the right keywords, allocate right budget to the relevant campaigns and to maximize ROI from all campaigns. Another challenge is that companies waste a great amount of budget on products not available, pitching customers who are not interested.

Also, ad hoc changes to budget or keyword bids are not good enough. You have to frequently look at the overall spend and optimize budget so you can maximize ROI. It is also difficult to continuously learn from the data incorporating the learnings into bids and allocations. To address such issues our Ad Words Spend Optimizer (ASO) tool helps you decide keywords for a campaign, find ideal bids for keywords, and allocate budget to all campaigns based on expected performance.

Channel Your Learnings from Data Instantly into Marketing Campaigns

While you keep making changes to your campaigns, landing pages, and search engine optimization, you have to keep learning from your campaigns and use that to reflect in your budget allocation as well as bids. Suppose your conversion rate in one of your landing pages improved significantly. Obviously, it needs higher budget allocation or probably higher bids. But how much? Marketing managers may rely on ad hoc changes to allocations or bids. What is really required is to look at the overall allocations and optimize them.

ASO selects keywords using intelligent keyword selection algorithms and data analytics and continuously improves the performance of your marketing campaign.

Allocate Budget Optimally, Maximize ROI on Marketing Spend

As the algorithm keeps allocating budget to high performing keywords and decreasing budget to low performing ones, you would automatically see higher ROI on marketing spend. This is a continuous process and our algorithm will let you continuously fine tune your ad spend.

Grow Business While Catering to Organizational Goals

Our SEA tool can meet the many objectives of an advertiser like category budgets, or budgets specific to a manager. Our tool also helps you select specific strategy types (Maximize clicks, Target CPA, Enhanced cost-per-click (ECPC) and Target return on ad spend (ROAS)) or mixed strategies to achieve your campaign's goal. Our optimizer modules will achieve your targeted return on ad spend, conversions, and click through rate (CTR) using advanced analytics. The bid optimizer module allows advertisers to automatically set bids and optimize selection of keywords for the campaign's goals. Our budget allocation module can automate your ad spending

process and provide insights into the performance on ad spending. The SEA tool enables you to make better decision on budget allocation on multiple campaigns and maximize benefits from digital advertisement effort.

Gain Competitive Advantage

With the ASO tool, you can stay ahead of your competitors in digital marketing. Easy to use, the tool integrates with popular search engine advertisement services such as Google’s Ad Words. With few clicks, you can set your goals and budget for online campaigns. The tool provides rich information on the performance of your campaigns and advises revised budget allocation using data from past performance of various campaigns. As you keep using the tool, you will be able to outperform your competition.

Greater Revenue, More Free Cash Flow and More Growth

As your revenue increases, that will lead to greater revenue, less inventory and more free cash flow which in-turn can be used to reinvest into the business and grow it.

No Data Science Expertise Required

Our tools are self-contained and need no data science expertise. Any marketing department can use our model.

AdWords Spend Optimization Model

<p>Key Word Optimizer <i>Select keywords to achieve conversions, click through rate or impressions</i> Impression: Maximize $\sum_k x_k \lambda_k$ Clicks: Maximize $\sum_k x_k \lambda_k CTR(b_k)$ Conversion: Maximize $\sum_k x_k \lambda_k CTR(b_k) CR(k)$ Subject to budget constraint $\sum_k x_k \lambda_k CTR(b_k) * b_k \leq B_T$</p>	<p>Bid Price Optimizer <i>Find ideal bids for specific goals</i> $CTR(b_k)$ is our model for click through rate of a certain key word k. $CTR(b_k) = \alpha_k (1 - e^{-\beta_k b_k})$</p>
<p>Profit Maximizer <i>Bid on right keywords to maximize profit</i> $Profit \pi_c = \sum_k \alpha_k (1 - e^{-\beta_k b_k}) CR_k (Profit_k - b_k)$</p>	<p>Budget Allocation Optimizer <i>Allocate Budget based on target revenue or profitability</i> If C1, C2 and C3 are three ongoing campaigns, the budget allocator decides budget B1, B2 and B3 for 3 campaigns in a way that it would maximize overall revenue or profit from the allocation. Profit: Maximize $\pi_1 + \pi_2 + \pi_3$ subject to $B1 + B2 + B3 \leq TB$ where $TB = Total\ budget$</p>

In this paper, we discuss various modules available in our SEA tool.

b_k is bidding price for a keyword k

B_T is the budget constraint for a campaign on day T

Perceptive Analytics

Perceptive Analytics is a Data Analytics company, offering specialized services in Online Marketing Analytics, Data Visualization and Reporting and application solutions. Perceptive Analytics was identified as one of the 'Top Ten Data Analytics Companies to Watch in 2016'. Our clients include Fortune 200 companies, Morgan Stanley, JP Morgan Chase, American Century Investments, Blue Apron etc. We serve large and medium sized companies in the US, India, and Australia.

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