

# Use Cases and Outlooks for Automatic Analytics



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## Why Automate?

- Save time from manual analysis
- Observe changes humans would miss
- Enable instant taking of action

### Current challenges:

- Choosing information to present out of hundreds of KPIs and metrics
- Explaining *why* changes occur, preferably in natural language

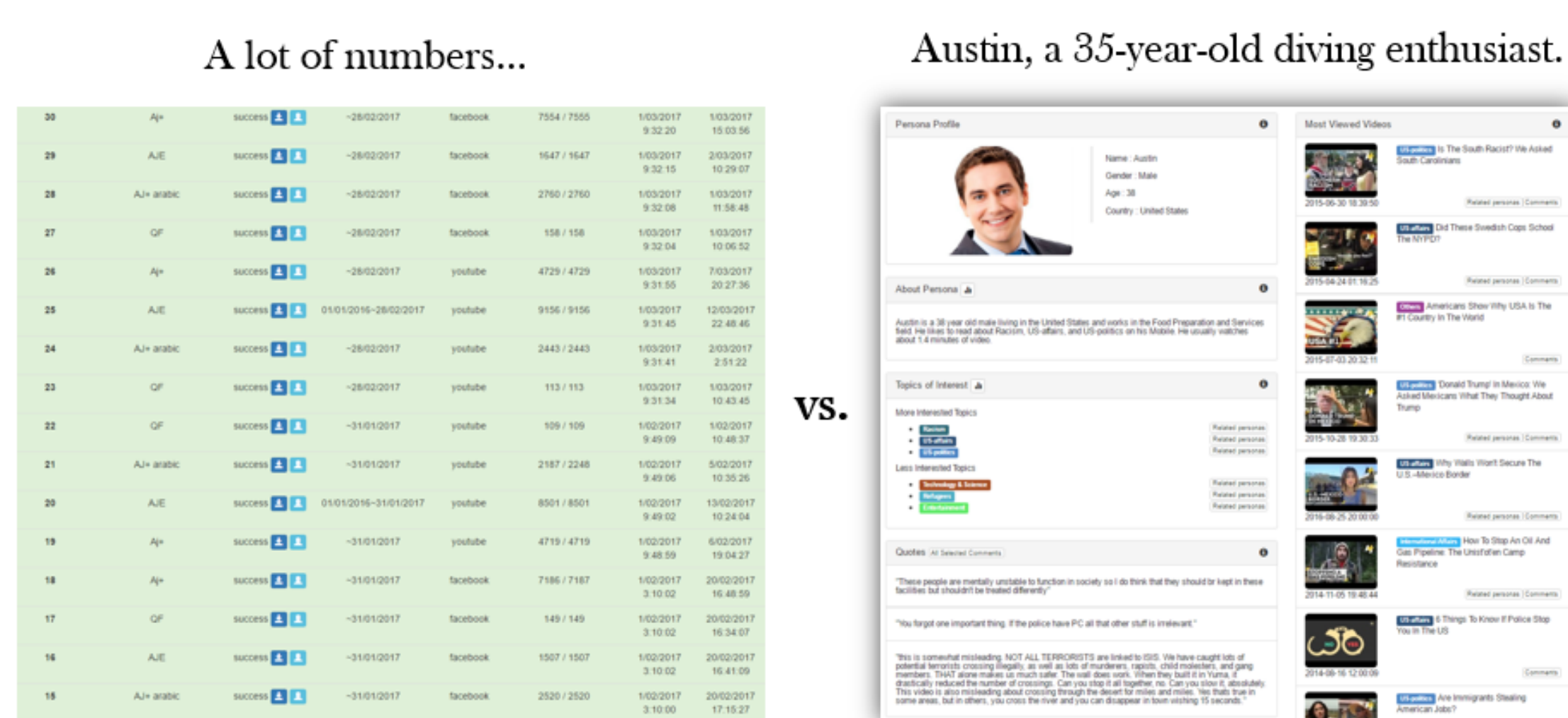
### Guidelines

- Specific
- Measurable
- Appropriate
- Realistic
- Timely

## Use Cases

- **Automated Customer Insights** (“Your Core Audience’s Preferences have Changed...”)
  - **eCommerce** (“Sales increased / decreased...”)
    - **Triggers** (“Your campaign profitability dropped to negative”)
      - Etc. (*100s of use cases!*)

## Automatic Analytics Tools and Tricks



“Personas give faces to data.”  
–Dr. Jim Jansen

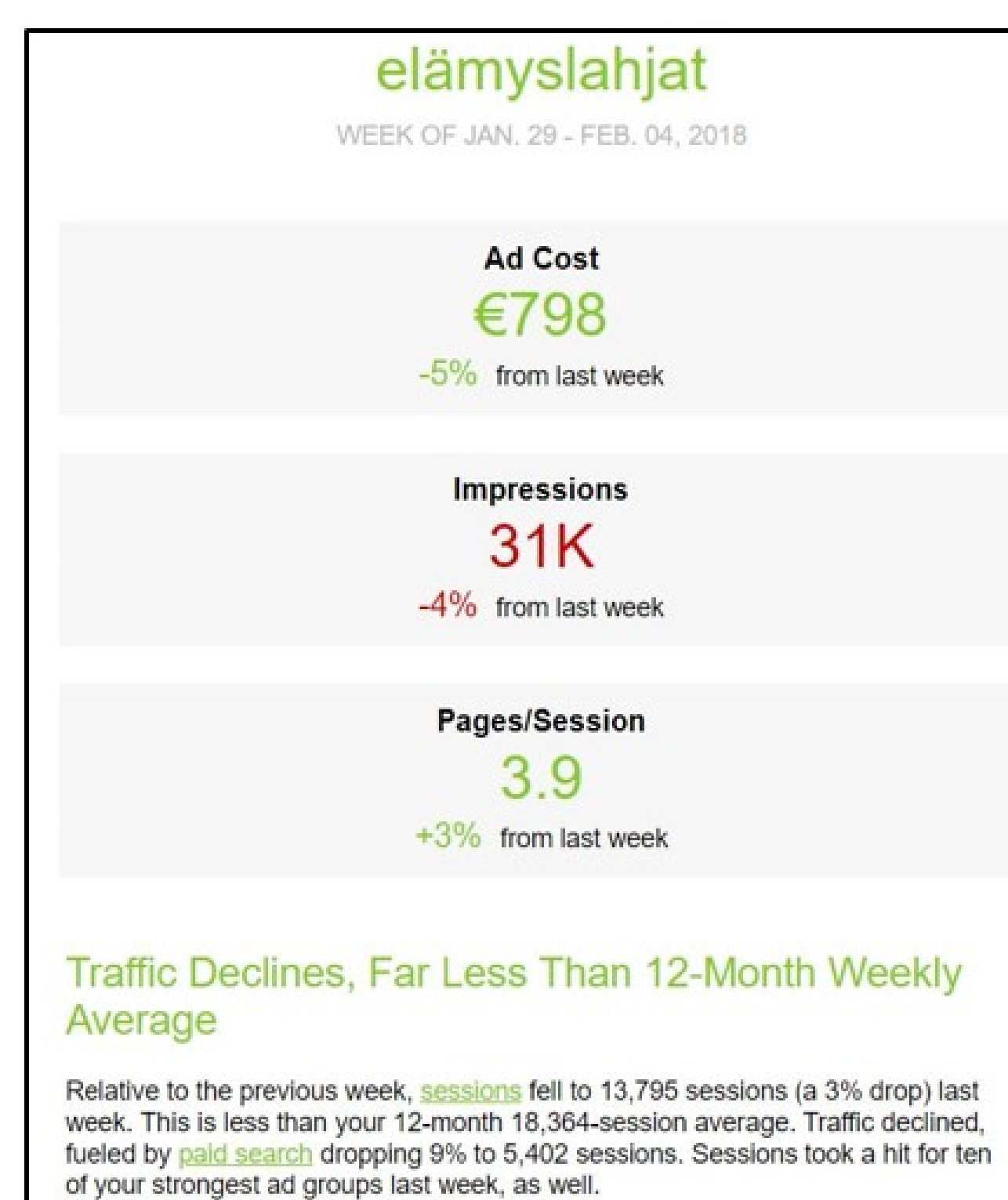


Figure 1: Quill Engage. The Tool Automatically Generates Fluent Reports from Google Analytics Data, And Provides Numerical Comparisons Based on Outliers and Trends.

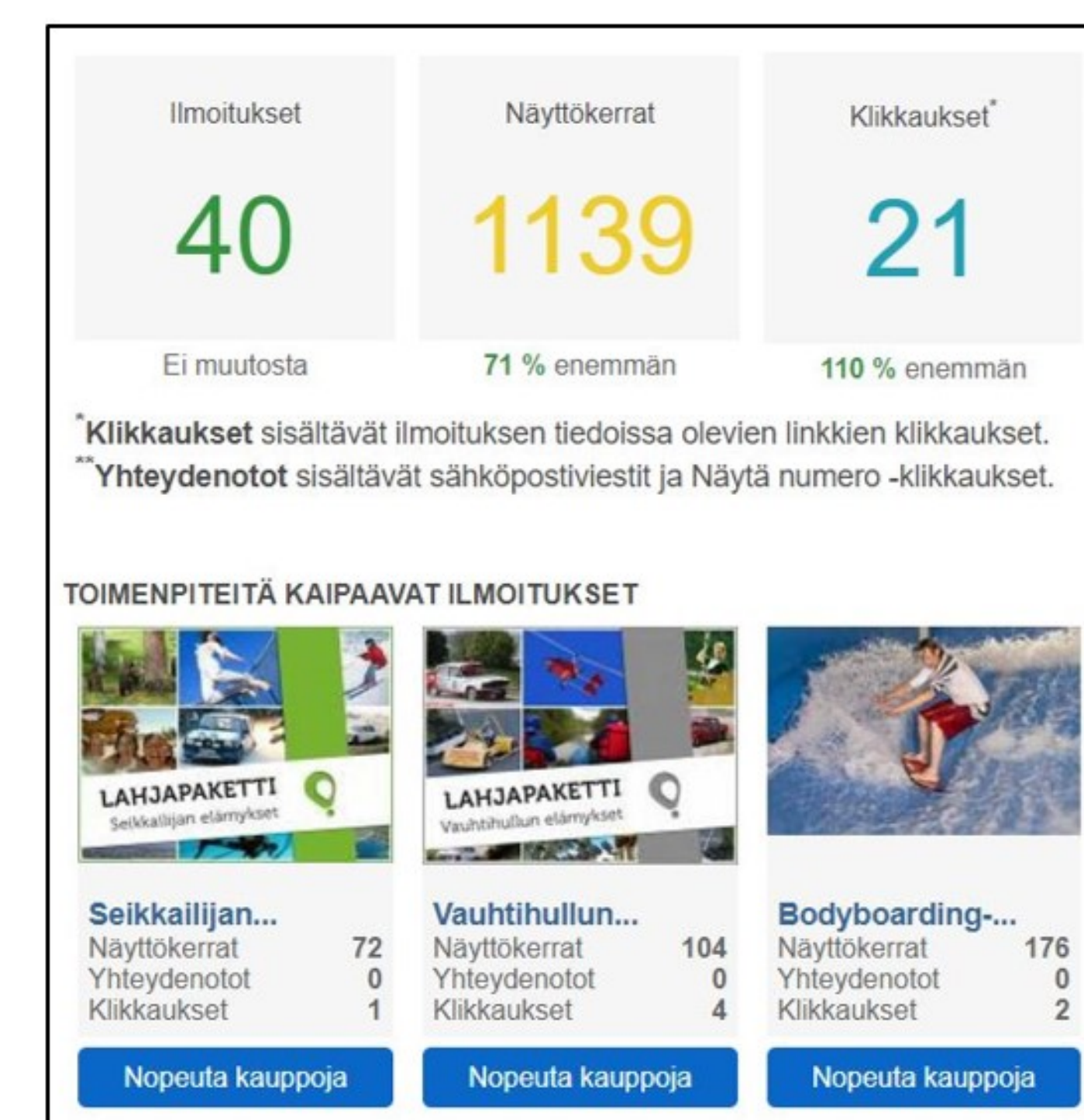


Figure 3: TenScores, the Automatic Quality Score Monitoring Tool.

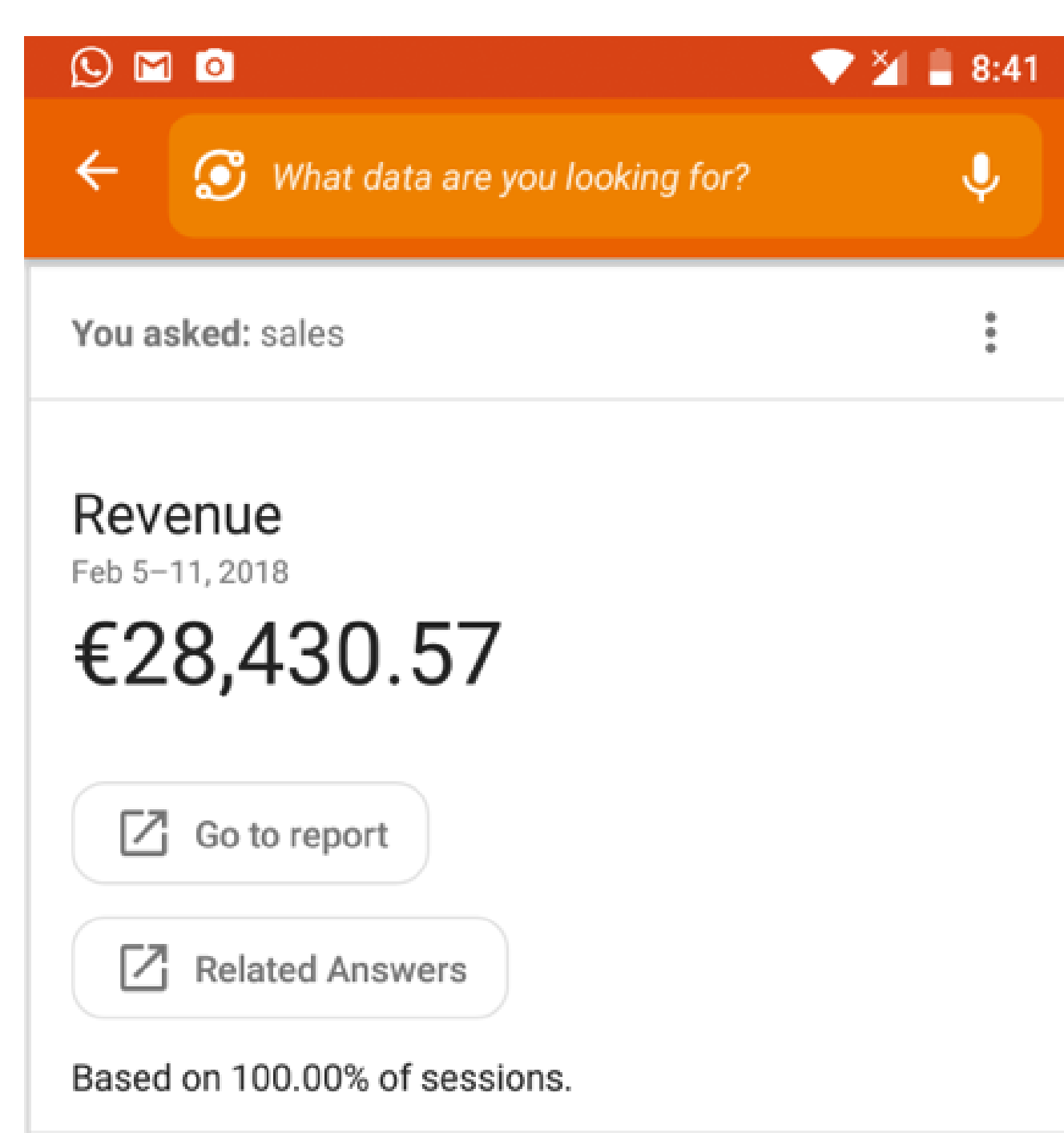


Figure 2: Screenshot from Google Analytics Android App, Showing the Functionality of Asking Questions from the Analytics System.



Figure 5: An example of Bing Ads Recommending to Increase Keyword Bid.

## Literature on (Automatic) Analytics

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J. Järvinen and H. Karjaluoto, “The use of Web analytics for digital marketing performance measurement,” Industrial Marketing Management, vol. 50, no. Supplement C, pp. 117-127, Oct. 2015.

J. Salminen, M. Milenković, and B. J. Jansen, “Problems of Data Science in Organizations: An Explorative Qualitative Analysis of Business Professionals’ Concerns,” in Proceedings of International Conference on Electronic Business (ICEB 2017), Dubai, 2017.

Y. Yang, Y. C. Yang, B. J. Jansen, and M. Lalmas, “Computational Advertising: A Paradigm Shift for Advertising and Marketing?,” IEEE Intelligent Systems, vol. 32, no. 3, pp. 3-6, May 2017.

## Risks of Automation

- Opportunistic recommendations (e.g., “Increase bids” by Google)
- Lack of deep (human) thinking (determining ‘X’, aka ‘Why?’)
- Spam problem (recommendations become like promotional offers)