DataFam Europe

Leveraging the VizQL Data Service for Enhanced Automation

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Agenda

01 What Is VizQL Data Service (VDS)?

02 VDS & Tableau Development Workflow

03 VDS Capabilities

04 VDS Use Cases

05 Demos

06 Useful Resources

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Anya Prosvetova

Lead Data Engineer @Aimpoint Digital

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Things I like:

- Exploring new APIs
- Automating processes
- Coffee

Quick Intro to APIs

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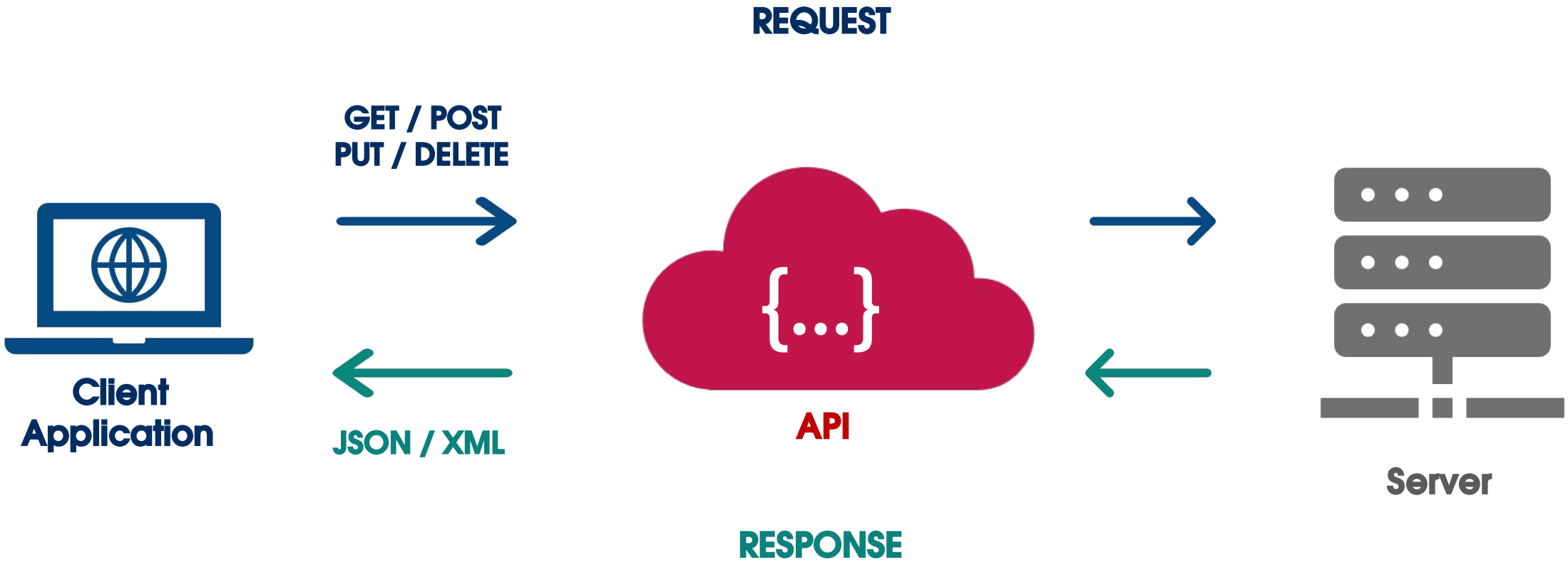

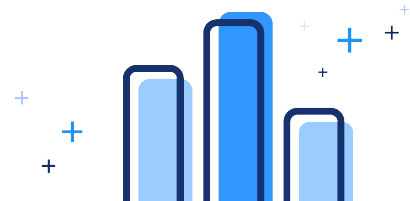

VizQL Data Service (VDS): New Developer Tool

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- VDS is a new Tableau API for programmatic data access
- Allows querying **published** Tableau data sources and sending data to external applications
- A flexible solution for extending data usage beyond Tableau dashboards

Enter Headless BI

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Approach to data analytics that **decouples the backend** (data processing, querying, and management) **from the frontend** (visualization and presentation)

- Separation of Data Layer & Visualization
- API-Driven Integration
- Customizable & Scalable
- Improved Flexibility

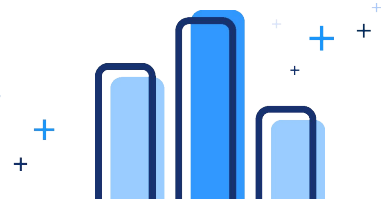

Tableau Data Flow: Before VDS

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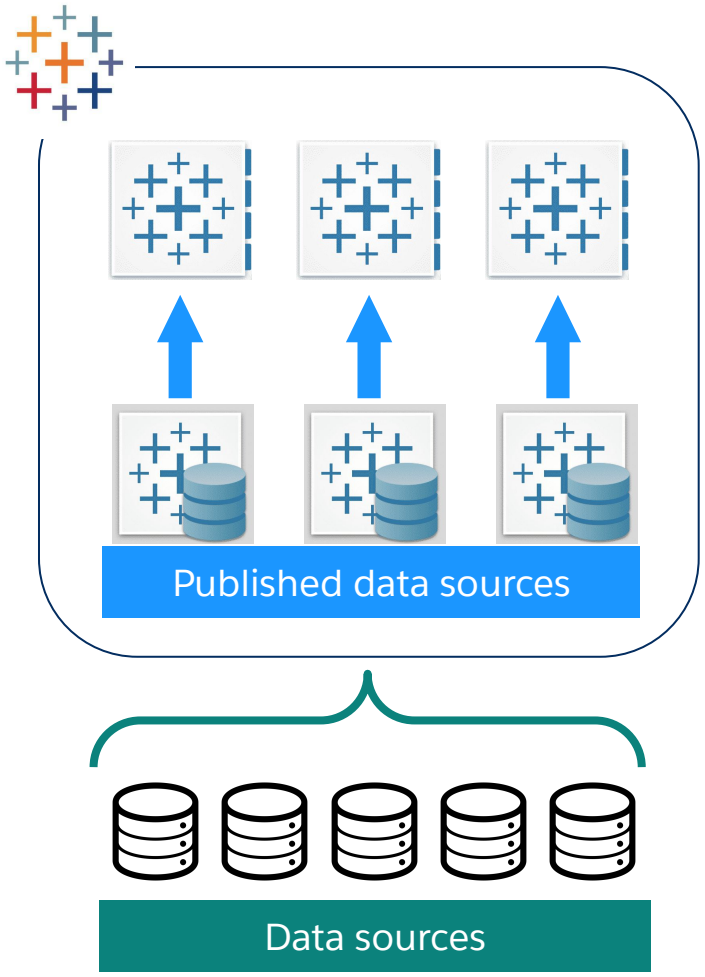

Tableau Data Flow: With VDS

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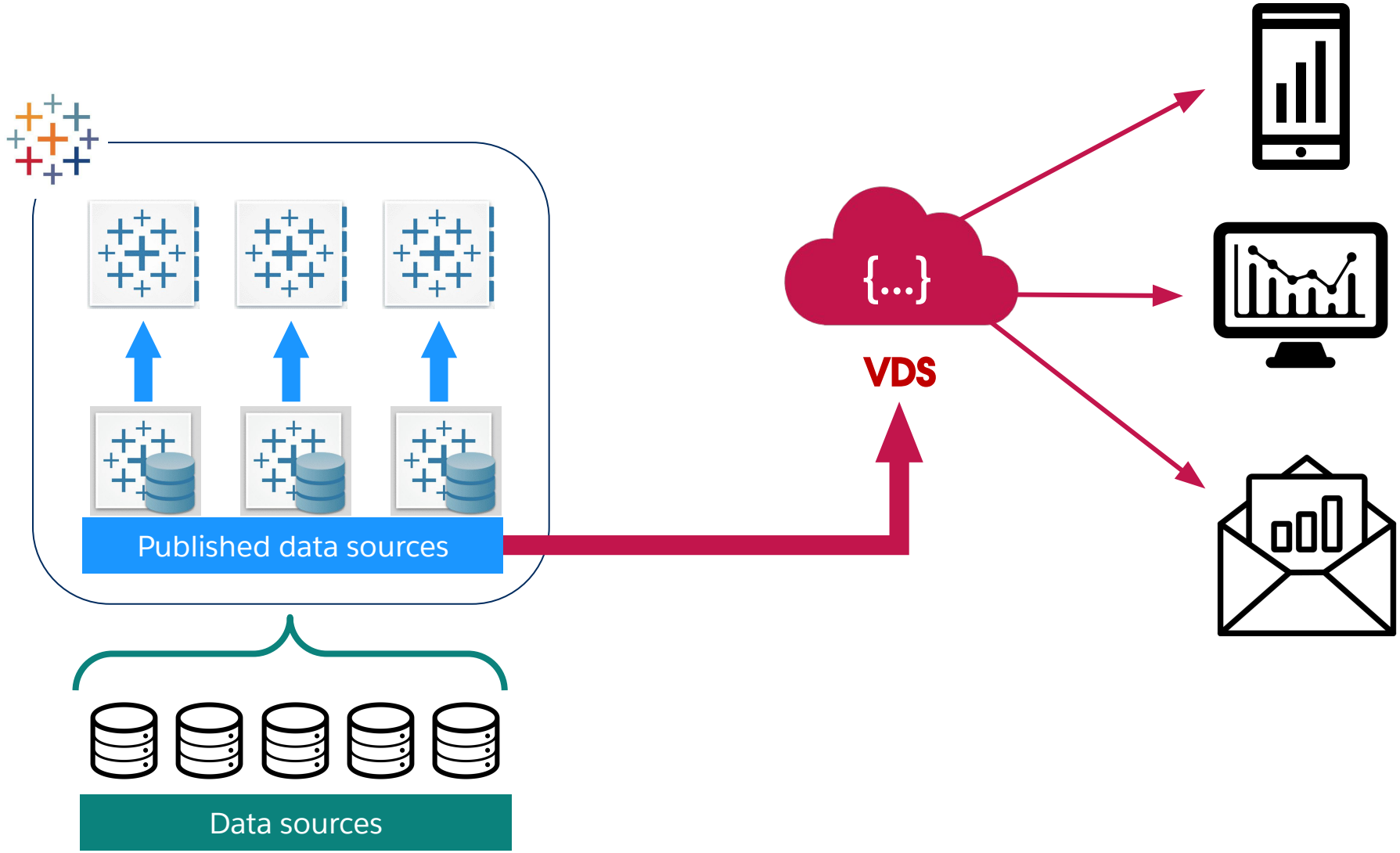

VDS Use Cases: Beyond Vizualizations

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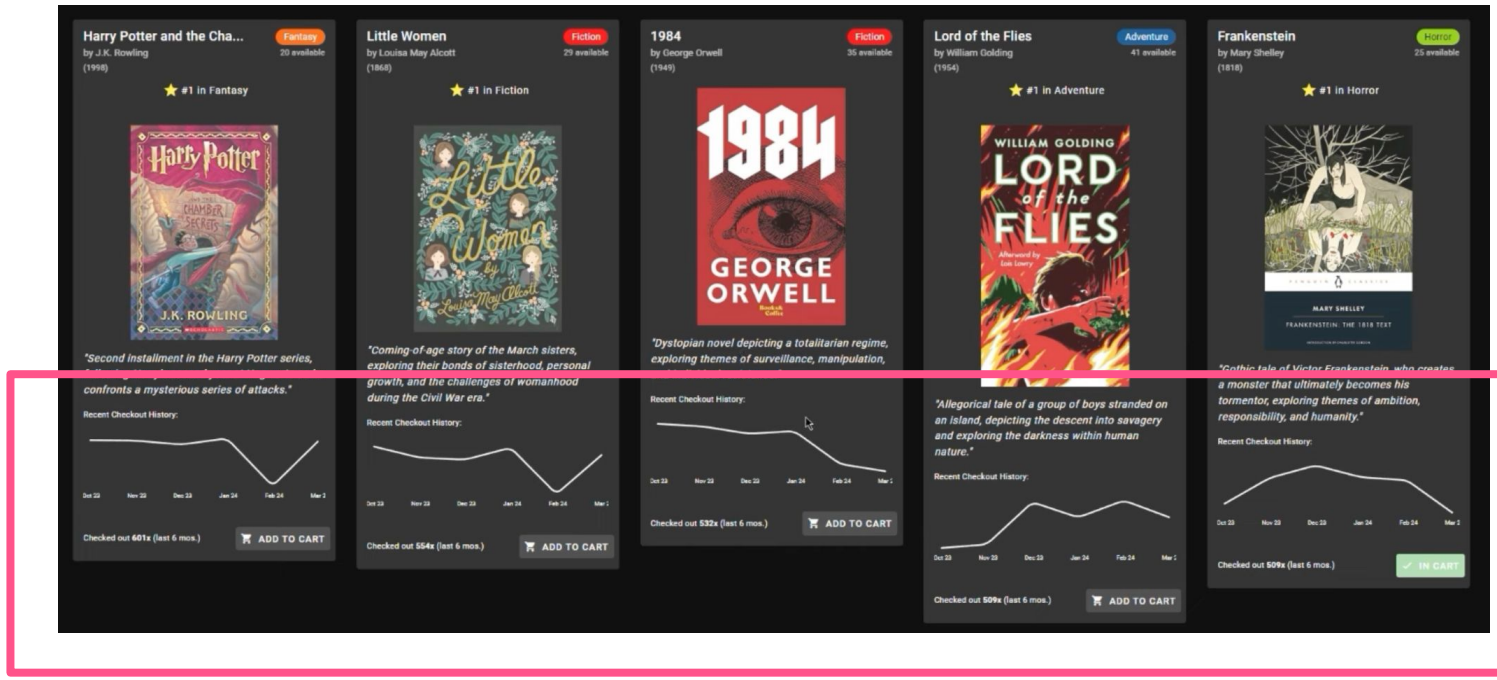
- Embed custom visualisations in any application using governed data sources
- Automate data distribution
- Power AI and machine learning applications



Screenshot from a YouTube video about VizQL Data Service by Kyle Massey

VDS: Key Features

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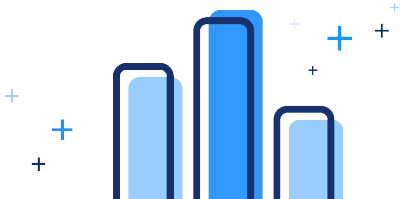
- View metadata about your data source to explore available fields
- Get existing columns with specified aggregation
- Filter your data using four filter types: QUANTITATIVE, SET, DATE or TOP
- Create new columns using familiar Tableau calculated field syntax

```
{
  "columns": [
    {
      "columnName": "Segment"
    },
    {
      "columnName": "Sales",
      "function": "SUM"
    }
  ]
}
```



VDS: Security & Governance

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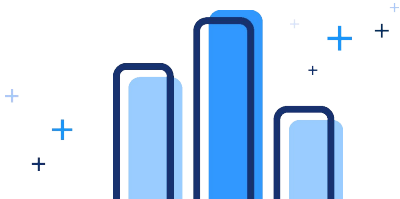
- Maintains existing data governance framework
- Requires API access configuration for the corresponding data source
- Enables controlled data access via personal access tokens (PAT) or connected apps



VDS Demo: Coffee orders dataset

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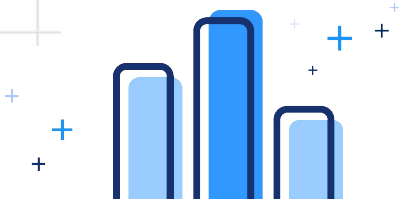
order_id	ordered_at	customer_name	borough_name	variety	bags_count	delivery_date	order_status
18	26/10/2024	Bean There	Hackney	Robusta	6	02/11/2024	deliverred
19	27/10/2024	Caffeine Corner	Camden	Liberica	2	01/11/2024	deliverred
20	30/10/2024	The Coffee House	Redbridge	Liberica	5	04/11/2024	deliverred
21	01/11/2024	Brewed Dreams	Bromley	Liberica	1	02/11/2024	deliverred
22	01/11/2024	London Brew	Enfield	Excelsa	6	04/11/2024	deliverred
23	02/11/2024	Java Junction	Westminster	Liberica	1	08/11/2024	deliverred
24	02/11/2024	The Daily Grind	Barking and Dagenham	Excelsa	10	05/11/2024	deliverred
25	02/11/2024	Bean There	Southwark	Liberica	10	05/11/2024	deliverred
26	04/11/2024	Caffeine Corner	Camden	Arabica	2	06/11/2024	deliverred
27	03/11/2024	Brewed Awakening	Camden	Liberica	3	06/11/2024	deliverred
28	03/11/2024	Perk Up Café	Islington	Arabica	2	06/11/2024	deliverred
28	06/11/2024	Bean There	Camden	Liberica	2	11/11/2024	new
29	07/11/2024	Bean There	Camden	Robusta	2	11/11/2024	new
30	08/11/2024	Java Junction	Westminster	Arabica	3	12/11/2024	new
31	09/11/2024	The Coffee House	Redbridge	Liberica	2	11/11/2024	new
32	09/11/2024	Caffeine Corner	Camden	Arabica	1	12/11/2024	new



VDS Demo: Get Started with Postman

Use code snippets in Tableau's Postman collection

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REQUEST

```
{
    "connection": {
        "tableauServerName": "{{tableau-server-name}}",
        "siteId": "{{site-id}}",
        "datasource": "{{datasource}}"
    },
    "query": {
        "columns": [
            {
                "columnName": "borough_name"
            },
            {
                "columnName": "customer_name"
            },
            {
                "columnName": "bags_count",
                "function": "SUM"
            }
        ]
```

RESPONSE

```
{
    "data": [
        {
            "borough_name": "Bromley",
            "customer_name": "The Coffee Spot",
            "SUM(bags_count)": 6
        },
        {
            "borough_name": "Camden",
            "customer_name": "Caffeine Corner",
            "SUM(bags_count)": 16
        },
        {
            "borough_name": "Barnet",
            "customer_name": "Java Jive",
            "SUM(bags_count)": 9
        },
        {
            "borough_name": "Bromley",
            "customer_name": "Brewed Dreams",
            "SUM(bags_count)": 1
        },
```

VDS Demo: Morning Brew Alerts

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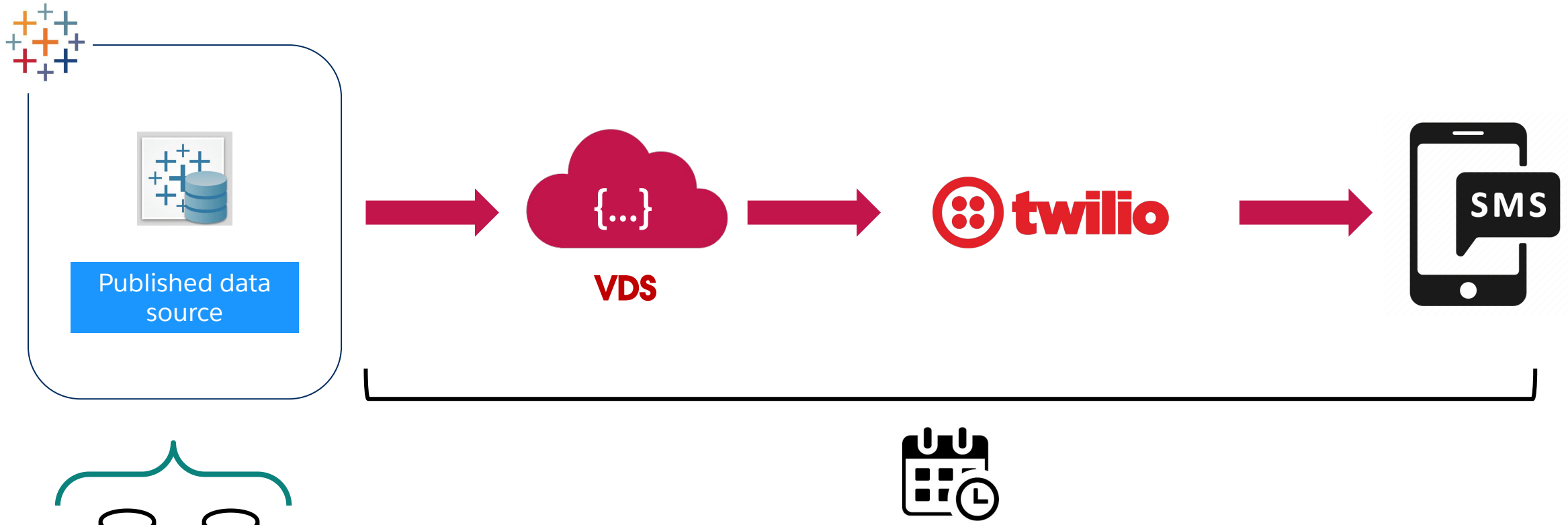
Sending scheduled text messages using data from published Tableau data sources



VDS Demo: Morning Brew Alerts

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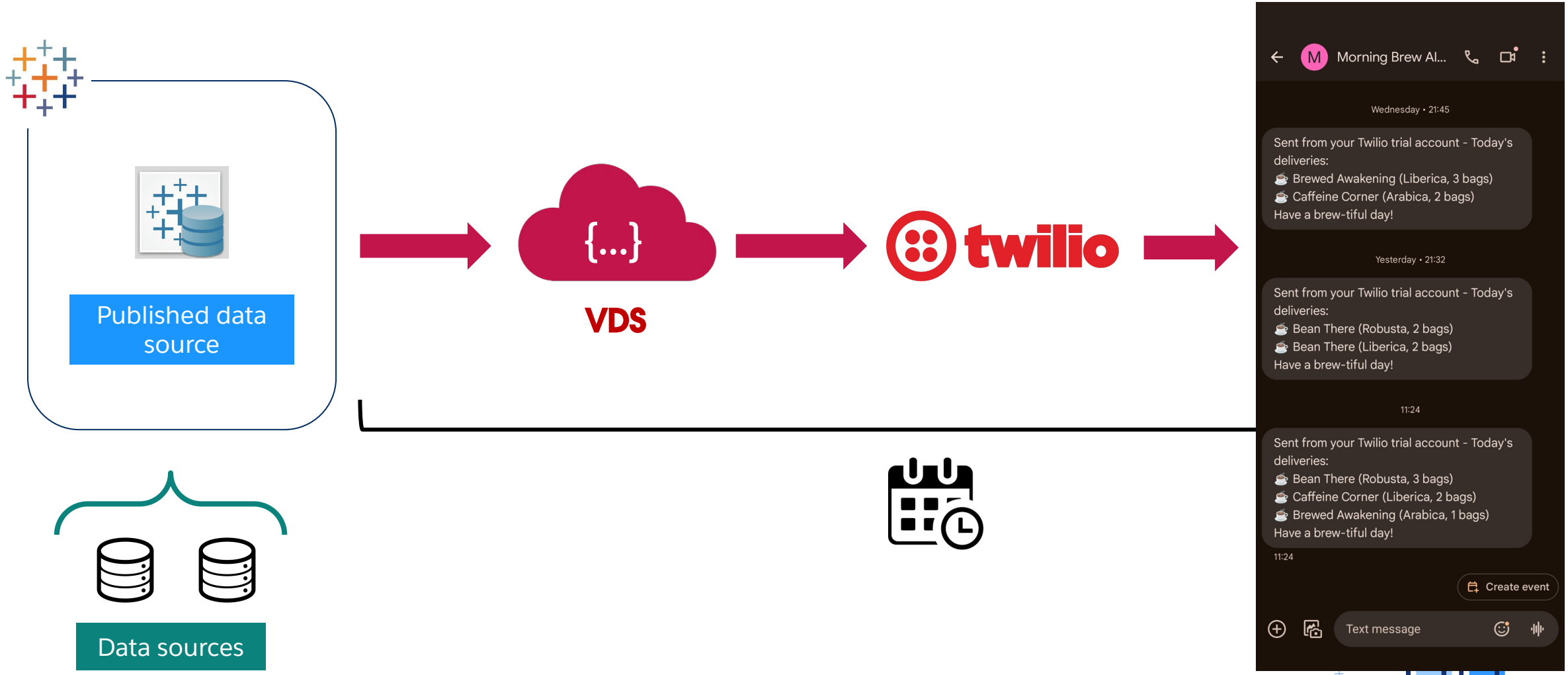

Useful Resources

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- VDS Documentation
- Introduction to VDS at Tableau Conference'24
- Blog about VizQL Data Service from Kyle Massey
- VDS: First impressions and discussion about Headless BI from Tableau Tim
- Join Tableau Developer Programme: www.tableau.com/developer

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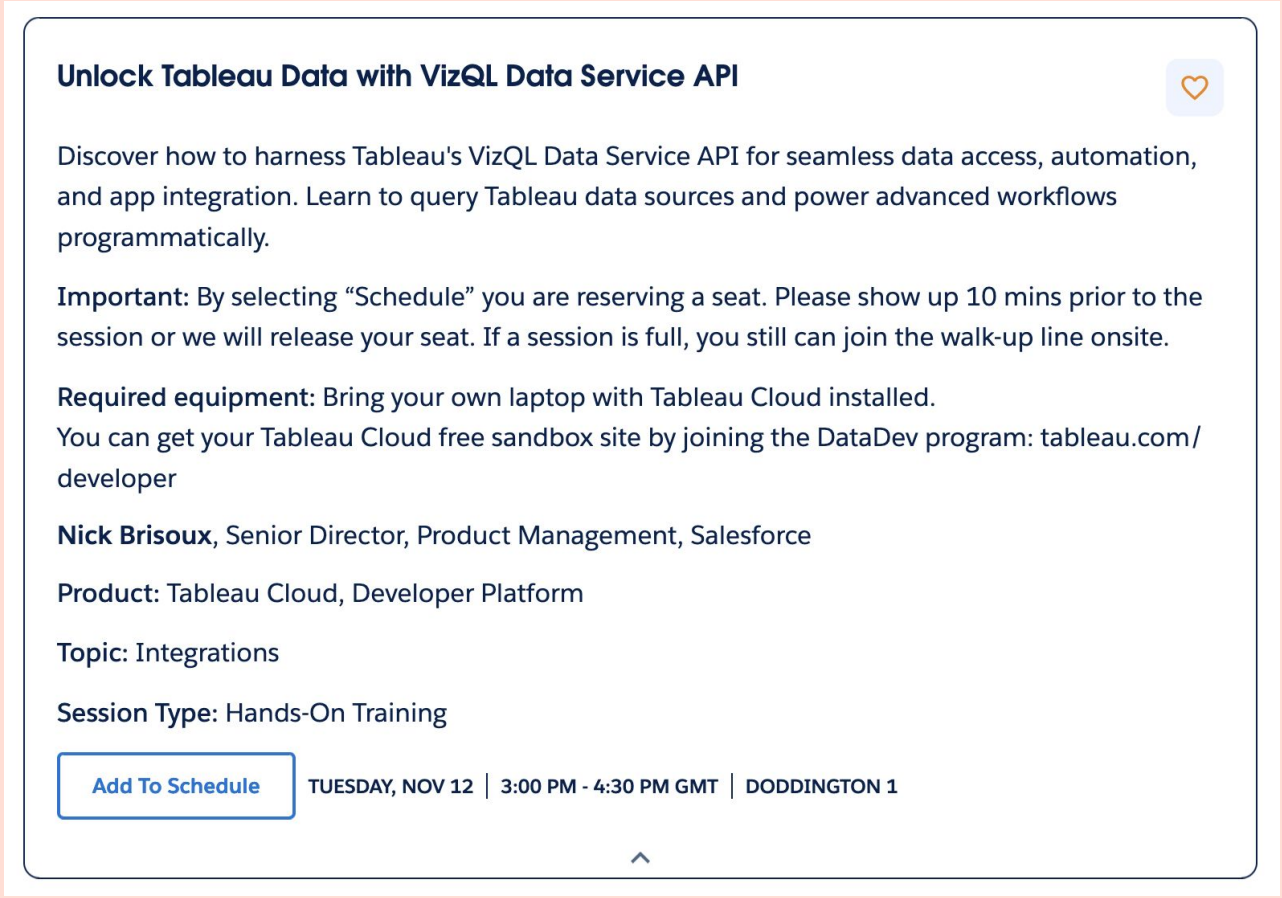
Hands-on VDS training tomorrow at 3pm



Unlock Tableau Data with VizQL Data Service API

Discover how to harness Tableau's VizQL Data Service API for seamless data access, automation, and app integration. Learn to query Tableau data sources and power advanced workflows programmatically.

Important: By selecting “Schedule” you are reserving a seat. Please show up 10 mins prior to the session or we will release your seat. If a session is full, you still can join the walk-up line onsite.

Required equipment: Bring your own laptop with Tableau Cloud installed.
You can get your Tableau Cloud free sandbox site by joining the DataDev program: tableau.com/developer

Nick Brisoux, Senior Director, Product Management, Salesforce

Product: Tableau Cloud, Developer Platform

Topic: Integrations

Session Type: Hands-On Training

Add To Schedule | TUESDAY, NOV 12 | 3:00 PM - 4:30 PM GMT | DODDINGTON 1

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Headless BI in Tableau session tomorrow at 3:40pm

Life with Headless BI in Tableau

Discover how Headless BI, Embedded Analytics, and VizQL Data Service can transform your data strategy today, with a glimpse into the future of Tableau, including Tableau Semantics.

Important: This session is first come first seated.

Alex Eskinasy, Principal Solutions Engineer - Embedded Analytics, Salesforce
Tim Payne, Principal Specialist Solution Engineer, Salesforce

Product: Embedded Analytics

Session Type: Breakout

Add To Schedule | TUESDAY, NOV 12 | 3:40 PM - 4:10 PM GMT | HARDWICK HUB

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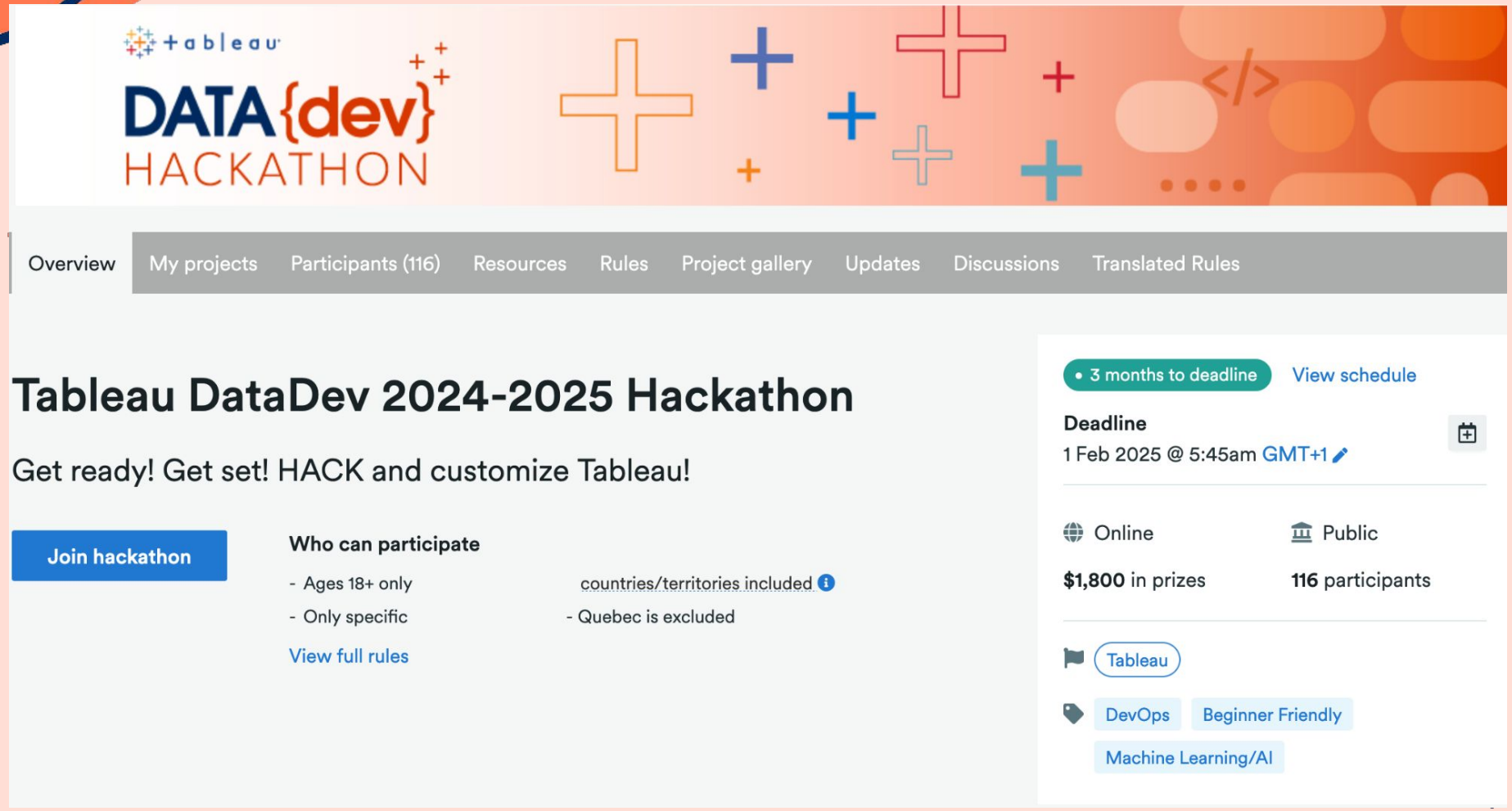

SCAN ME

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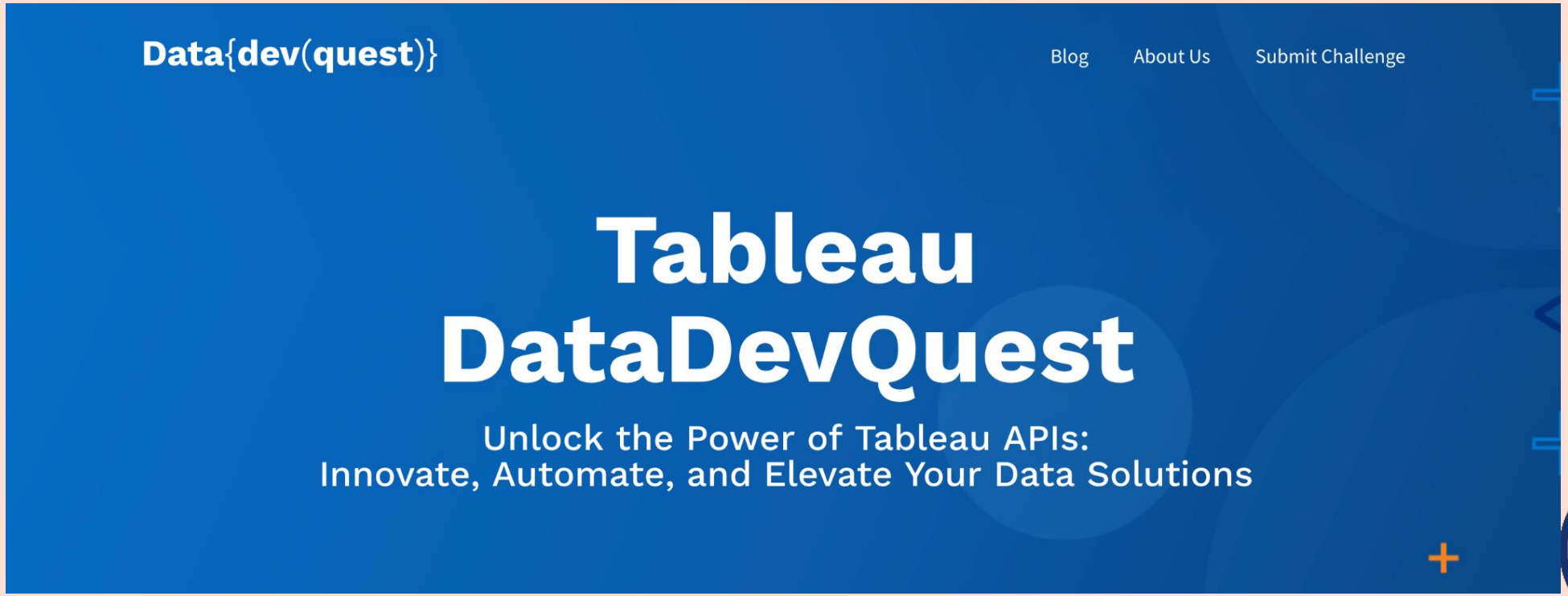

Monthly DataDev Challenges

datadevquest.com

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Thank you

SCAN ME

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Coffee on us.

The first 50 DataFam to take a short survey of this event will be eligible to receive a £5 Starbucks gift card.*

1. Scan the QR code
2. Take the Event survey or the Keynote survey
3. Present your completed survey and redeem your gift card at the Welcome Desk on Monday or Tuesday

*The first 50 eligible DataFam Europe in person attendees who fill out and complete the DataFam Europe Event Survey in its entirety and show the survey completion page at the event registration desk or as otherwise instructed by Salesforce, Inc. ("Salesforce") may receive one (1) £5 GBP Starbucks gift card. Rewards must be redeemed on-site at the event. Your eligibility to receive the reward is not affected by the content of your survey responses. Must be at least 18+. Excludes officials and employees of any government entity, as well as employees, contractors, agents, directors and consultants of Salesforce or its parent, affiliated or subsidiaries. By accepting a reward, you agree that doing so complies with your employer's internal policies. Limit is one (1) reward per person subject to verification of eligibility and availability. Offer is not endorsed or sponsored by the reward producer, distributor or manufacturer. Rewards are subject to any terms and conditions set forth by the reward issuer, including without limitation expiration dates and associated fees, and are non-transferrable and not redeemable for cash. Offer subject to change at any time. Other terms and restrictions may apply.