**Looker Studio Documentation**

**1. Introduction**

Looker Studio (formerly Google Data Studio) is a free business intelligence and data visualization tool from Google that allows users to create interactive dashboards and reports. It connects to various data sources, including Google Analytics, BigQuery, Sheets, and external databases, enabling dynamic insights and data exploration.

**2. Key Features**

* **Data Connectivity:** Connects to multiple data sources such as Google Sheets, Google Analytics, BigQuery, and third-party platforms.
* **Interactive Dashboards:** Create real-time, customizable dashboards.
* **Drag-and-Drop Interface:** Easy-to-use UI for building visualizations.
* **Collaboration & Sharing:** Share reports via links and set viewing or editing permissions.
* **Custom Calculations:** Use calculated fields, formulas, and custom metrics.
* **Scheduled Reporting:** Automate report delivery to stakeholders.

**3. Getting Started**

**3.1 Creating an Account**

1. Go to [Looker Studio](https://lookerstudio.google.com/).
2. Sign in using your Google account.
3. Click **"Create"** → **"Report"** to start building your first dashboard.

**3.2 Connecting a Data Source**

1. Click **"Add Data"** in the report editor.
2. Choose a connector (e.g., Google Analytics, Google Sheets, BigQuery, MySQL, etc.).
3. Authenticate and select the dataset you want to use.
4. Click **"Add to Report."**

**4. Building a Dashboard**

**4.1 Adding Visual Elements**

* **Charts:** Add bar charts, pie charts, tables, geo maps, scorecards, and more.
* **Filters:** Use dropdowns, sliders, and date filters for interactive reports.
* **Themes & Styling:** Customize fonts, colors, and layouts for better visualization.

**4.2 Using Calculated Fields**

To create a new metric:

1. Click **"Add a field"** in the data panel.
2. Enter a formula (e.g., Revenue / Sessions to calculate conversion rate).
3. Click **"Save."**

**5. Data Blending**

Looker Studio allows merging multiple data sources:

1. Click **"Blend Data."**
2. Select the primary and secondary data sources.
3. Choose a common key for joining the data.
4. Add fields and metrics to the blended dataset.

**6. Sharing & Collaboration**

* Click **"Share"** in the top-right corner.
* Set permissions as **Viewer** or **Editor.**
* Use **Scheduled Email Delivery** to send periodic reports.

**7. Best Practices**

* **Optimize Performance:** Use data extracts and limit rows to improve speed.
* **Use Filters Effectively:** Reduce unnecessary data loading.
* **Maintain Consistency:** Standardize colors and fonts for professional reports.
* **Ensure Data Accuracy:** Verify source integrity and calculations.

**8. Deployment & Automation**

* **Use Looker Studio API:** Automate report generation and data updates.
* **Google Apps Script:** Automate data fetching from Google Sheets.
* **Third-Party Integrations:** Connect with tools like Zapier for automated workflows.

**9. Conclusion**

Looker Studio is a powerful and flexible tool for data visualization, offering real-time insights, interactive reporting, and seamless integration with Google and external data sources. It is an essential tool for businesses, analysts, and marketers to track and optimize performance effectively.