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CrUX POC Results

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# CrUX

**Purpose**: CrUX is a public dataset and online dashboard that provides real-world performance data collected from millions of Chrome users. It offers insights into various web performance metrics, including loading time, interactivity, and visual stability.

**Usage**: Developers and website owners can utilize CrUX to understand how their websites perform in the real world. It helps identify performance bottlenecks and prioritize optimizations based on actual user experiences.

# Different to LightHouse

**CrUX** focuses on aggregating **data from real user’s experiences** to provide a comprehensive view of web performance across different devices, network conditions.

While,

**Lighthouse** is a tool that developers can **run locally to evaluate specific web pages** and generate detailed reports with actionable insights and recommendations. It provides a comprehensive analysis of various performance metrics and best practices.

**Usage Steps**

1. Collecting Data:
   * Ensure that your website has real user data being **sent** to CrUX. This typically requires implementing the CrUX JavaScript snippet on your web pages, implementation details available in the CrUX documentation.
2. Accessing CrUX Data:
   * Visit the CrUX website (<https://developers.google.com/web/tools/chrome-user-experience-report>) and navigate to the "CrUX Dashboard" section.
   * Click on the "Open Dashboard" button to access the CrUX online dashboard.
3. Selecting Metrics:
   * In the CrUX dashboard, you can explore different web performance metrics such as First Contentful Paint (FCP), Largest Contentful Paint (LCP), and Cumulative Layout Shift (CLS). These metrics provide insights into various aspects of user experience.
   * Choose the metrics that are relevant to your analysis and click on them to view more detailed information.
4. Filtering Data:
   * CrUX allows you to filter data based on dimensions such as country, device type, connection type, and more. Use the filtering options available in the dashboard to narrow down the data to specific segments that you want to analyze.
5. Analyzing Performance:
   * Analyze the performance data displayed in the CrUX dashboard. You can view trends over time, compare different metrics, and identify areas where your website may be underperforming.
   * Look for patterns and correlations in the data to gain insights into how your website performs across various dimensions.
6. Optimization and Prioritization:
   * Use the CrUX data to prioritize optimization efforts. Identify areas where your website's performance can be improved and focus on those aspects that have the most significant impact on user experience.
   * Utilize the actionable insights from CrUX to make informed decisions about optimizations, such as reducing page load times, improving interactivity, or minimizing layout shifts.

**Inference**

To use CrUX for any available website, first we need data to be sent to CrUX, then over some time with users using the website, it will have real user data available for check and optimization.

Which is happening for [**https://www.verizon.com/**](https://www.verizon.com/)as Origin

The eligibility for CrUX usage is, it must be

Publicly Discoverable

Sufficiently Popular

Data can be collected using CrUX, as this is having real data

Generative AI has a wide range of use cases across various industries and domains. Here are some common use cases of generative AI:

1. Image Generation and Synthesis:

- Generating realistic images and artwork

- Style transfer and image-to-image translation

- Augmenting or enhancing images

2. Text Generation and Natural Language Processing (NLP):

- Generating human-like text, including chatbots and virtual assistants

- Language translation and paraphrasing

- Summarization and text completion

3. Music and Audio Generation:

- Composing new music and generating melodies

- Enhancing audio quality and noise reduction

- Creating sound effects and virtual instruments

4. Video and Animation:

- Generating or enhancing videos and animations

- Video prediction and future frame synthesis

- Deepfake generation and manipulation

5. Data Augmentation and Synthesis:

- Generating synthetic data for training machine learning models

- Data anonymization and privacy protection

- Data synthesis for simulations and testing

6. Virtual Reality (VR) and Augmented Reality (AR):

- Creating virtual environments and objects

- Real-time rendering and interactive experiences

- Virtual character generation and animation

7. Drug Discovery and Molecule Design:

- Designing new drug candidates and optimizing molecular structures

- Virtual screening and de novo drug design

- Predicting chemical and biological properties of compounds

8. Anomaly Detection and Fraud Prevention:

- Identifying anomalies in data distributions

- Fraud detection and cybersecurity

- Intrusion detection and network anomaly analysis

9. Personalized Recommendations:

- Providing personalized product or content recommendations

- Personalized marketing and targeted advertising

- Recommending movies, music, books, or other items

10. Robotics and Autonomous Systems:

- Generating robot behaviors and motion planning

- Simulating realistic physics and environments

- Training virtual robots for real-world tasks

11. Creative Design and Content Generation:

- Designing logos, graphics, and user interfaces

- Generating storylines, characters, and narratives

- Automated content generation for marketing or advertising

These are just a few examples of the diverse applications of generative AI. The field is rapidly evolving, and new use cases are continuously emerging as researchers and practitioners explore the capabilities of generative models and algorithms.