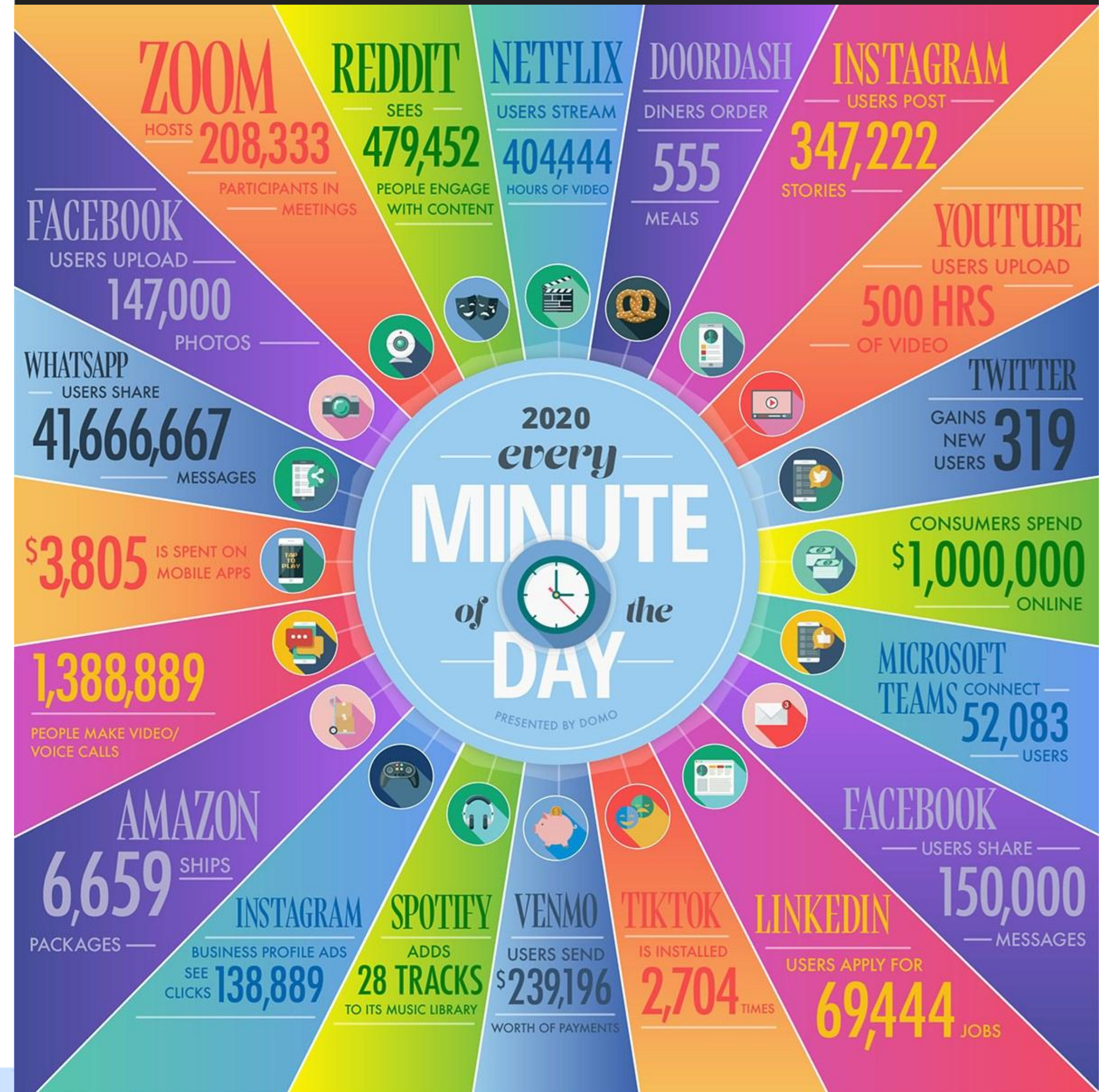


Introduction to data engineering



Yasmine Chelly
ML GDE

“Data is the new oil because data can be used to derive insights. Depending on what a company does, insights can drive customer retention, upselling, new revenue models, advertising, etc. If data is the new oil, insights are the new money.” - Forbes



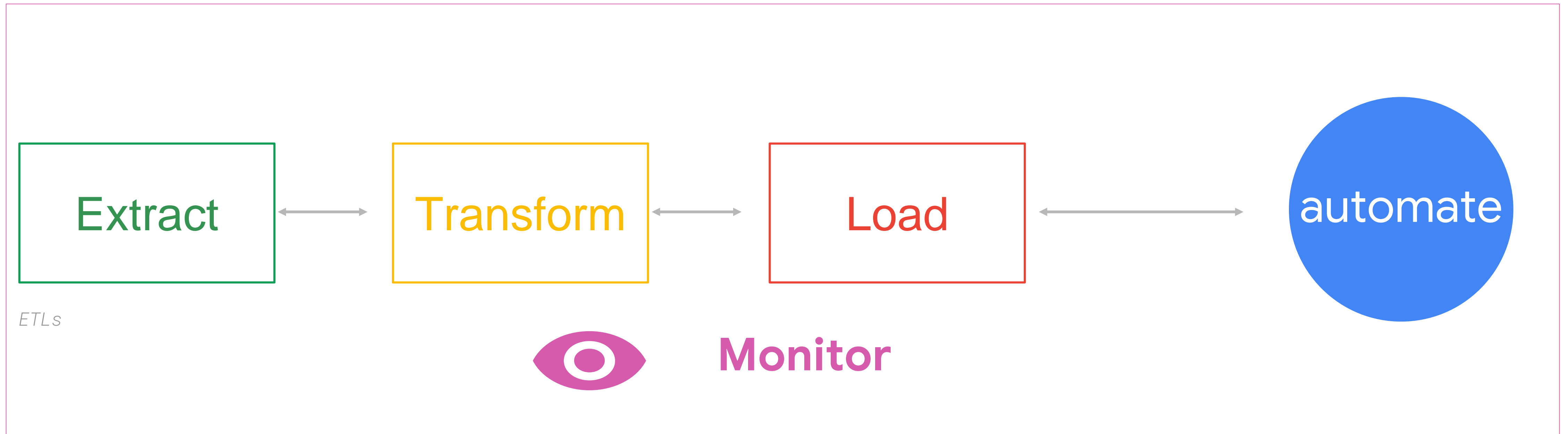
What is a data engineer ?

A developer with a tester mindset

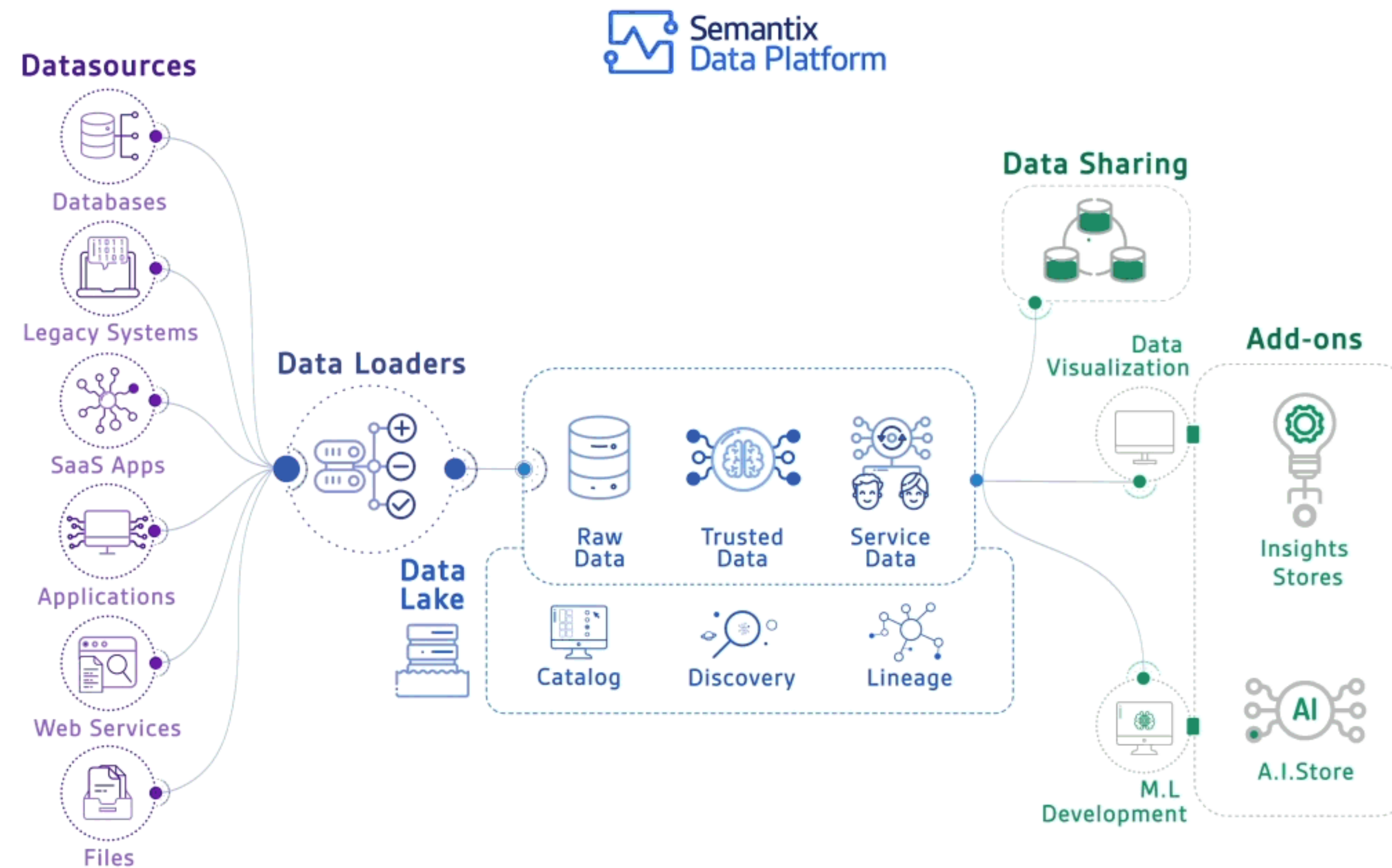
Data engineers are the people who **design** the system that **unifies data** and can help others navigate it.

Data engineers perform many different tasks including: **Acquisition**, **Cleansing**, **Conversion** and **deduplication**.

Simplified pipeline



A real pipeline

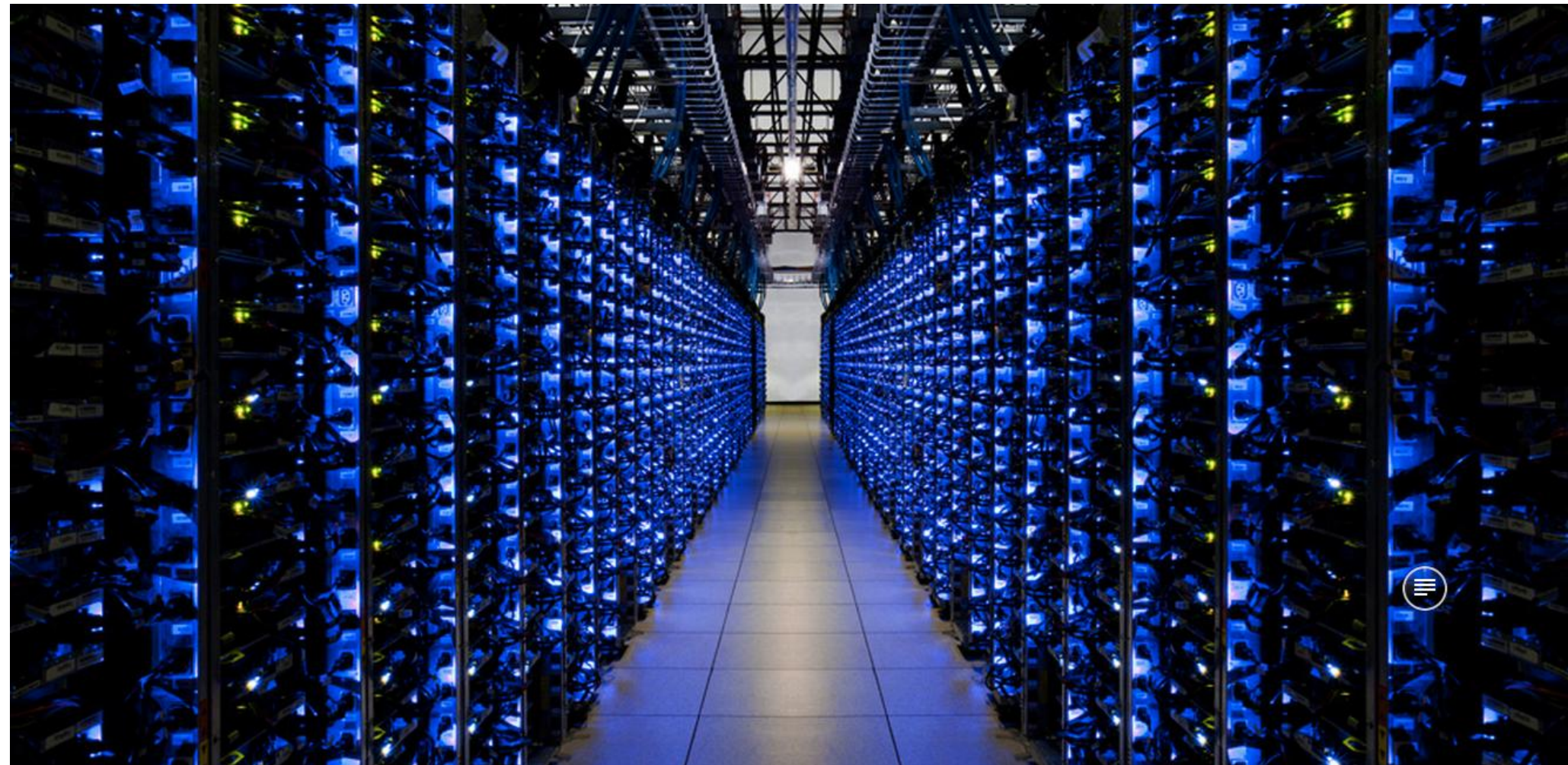


Google's role in modern data engineering

Let's get to know some GCP tools

What is Google Cloud Platform

GCP



Google Cloud

Big Data and ML Products

Compute Power

Storage

Networking

Security

Google's DE services



Lab

<https://shorturl.at/fkpgA>

Lab

<https://shorturl.at/fkpgA>

```
function filterStudies({ studies, filterByOrg = false, filterByYear = false }) {
  return studies.filter(study => {
    if (filterByOrg) {
      return study.lead_organization === 'NIH';
    }
    if (filterByYear) {
      return study.start_year > 2010;
    }
    return true;
  });
}
```

Thank You!



Yasmine Chelly
ML GDE



bibliography

<https://www.dremio.com/resources/guides/intro-data-engineering/>

<https://medium.com/analytics-vidhya/the-5-vs-of-big-data-2758bfcc51d>

<https://cloud.google.com/blog/products/data-analytics/building-the-data-engineering-driven-organization?hl=en>

https://maelfabien.github.io/bigdata/gcps_1/#history-and-context

```
function filterStudies({ studies, filterByOrg = false, filterByTopic = false }) {  
  return studies.filter(study => {  
    if (filterByOrg) {  
      return study.organization === 'Google';  
    }  
    if (filterByTopic) {  
      return study.topic === 'Data Engineering';  
    }  
    return true;  
  });  
}
```