When should NoSQL be used:

- When huge amount of data need to be stored and retrieved .
- The relationship between the data you store is not that important
- The data changing over time and is not structured.
- Support of Constraints and Joins is not required at database level
- The data is growing continuously and you need to scale the database regularly to handle the data.

Difference between SQL and NoSQL

When it comes to choosing a database the biggest decision is picking a **relational (SQL)** or **non-relational (NoSQL)** data structure. While both the databases are viable options still there are certain key differences between the two that users must keep in mind when making a decision.

The Main Differences:

1. **Type :**
   SQL databases are primarily called as Relational Databases (RDBMS); whereas NoSQL database are primarily called as non-relational or distributed database.

2. **The Scalability –**
   In almost all situations SQL databases are vertically scalable. This means that you can increase the load on a single server by increasing things like RAM, CPU or SSD. But on the other hand NoSQL databases are horizontally scalable. This means that you handle more traffic by sharding, or adding more servers in your

NoSQL database. It is similar to adding more floors to the same building versus adding more buildings to the neighborhood. Thus NoSQL can ultimately become larger and more powerful, making these databases the preferred choice for large or ever-changing data sets.

3. **The Structure –**
   SQL databases are table-based on the other hand NoSQL databases are either key-value pairs, document-based, graph databases or wide-column stores. This makes relational SQL databases a better option for applications that require multi-row transactions such as an accounting system or for legacy systems that were built for a relational structure.

4. **Property followed –**
   SQL databases follow ACID properties (Atomicity, Consistency, Isolation and Durability) whereas the NoSQL database follows the Brewers CAP theorem (Consistency, Availability and Partition tolerance).

5. **Support –**
   Great support is available for all SQL database from their vendors. Also a lot of independent consultations are there who can help you with SQL database for a very large scale deployments but for some NoSQL database you still have to rely on community support and only limited outside experts are available for setting up and deploying your large scale NoSQL deployments.

Conclusion.

- To sum up, there are plenty of NoSQL databases out there to assist in data mining for one purpose or the other. However, a true NoSQL database is identified by its features like scalability, flexibility, and efficiency to accommodate data.
- Even though NoSQL databases are of 4 types - document, key-value, column-oriented, and graph, they are majorly non-relational databases that help in data storage of usually large amounts of data.