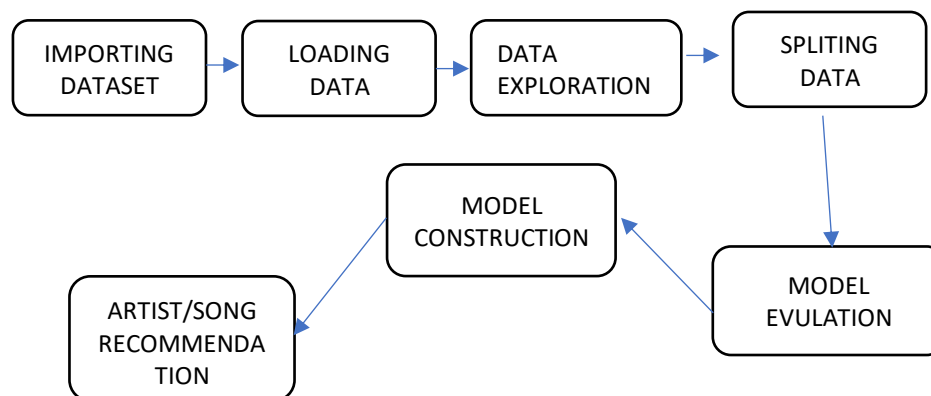# PROJECT PROPOSAL

Title: SONG/ARTIST RECOMMENDATION SYSTEM USING SPARK STREAMING

SUMMARY: The "Song Recommendation System using Spark Streaming" aims to recommend new musical artists to a user based on their listening history. Suggesting different songs or musical artists to a user is important to many music streaming services, such as Pandora and Spotify. I will develop an interactive, scalable, and effective solution that improves user experience when listening to music by applying PySpark SQL, Apache Spark, findSpark, PySpark and MLlib.
Two strong tools that are frequently used in big data processing are Hive and Spark.
using hive and spark we can conclude that each user is recommended with a unique playlist based on their interest. This also provides the information for the user like what/at are the most popular songs, who are all the artist, which artist is liked by the people through which he/she gets to know about the current trend.

TECHNOLOGY STACK:

The system will utilize the following technologies:

- Apache Spark: Apache Spark is an open-source unified analytics engine for large-scale data processing. Distributed stream processing framework for real-time data ingestion, preprocessing, and recommendation generation.

- PySpark: It supports integrated relational processing with Spark's functional programming. It provides support for the various data sources to makes it possible to weave SQL queries with code transformations, thus resulting a very powerful tool.

- PySpark SQL: PySpark SQL establishes the connection between the RDD and relational table.

- FindSpark: Findspark can add a startup file to the current IPython profile so that the environment variables will be properly set and pyspark will be imported upon IPython startup.

- MLlib: Machine learning library for implementing collaborative filtering algorithms. Streaming sources: Kafka or Kinesis for real-time data ingestion.

REFERENCE:

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