Assignment 4

Part A

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Subject

CSCI 5410 (Serverless Data Processing)

Professor

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Utilization of Amazon SageMaker and Amazon Comprehend by Halifax Bike Rental Company

The fully managed machine learning service **"Amazon SageMaker"** allows data scientists, data researcher and developers to efficiently and simply build and train machine learning models, then deploy those models directly into a hosted area that is prepared for production. This enables users to create and train machine learning models quickly and easily. Additionally, it offers popular machine learning algorithms that have been enhanced for distributed environments and extremely large data sets.

"Amazon Comprehend" is a natural language processing (NLP) service that mines text for meaning and insights using machine learning. Additionally, a user can recognise the languages of the text and the people who are presenting it, extract relevant keywords, understand how people feel about particular goods or services, and locate pertinent topics in a document library. Users can find topics that best display the information in a collection by feeding Comprehend a set of text documents.

"The Halifax Bike Rental Company" can use the **"AWS SageMaker"** service to build, train, and deploy machine learning models and algorithms at scale in order to estimate the rental count of the bike using historical data. The marketing that SageMaker projects using data from previous customers who have used bike-rental services can also be advantageous for this service. The rental of bikes is the key service offered, and customers can be drawn in by providing the best deals possible. These deals can be calculated using Amazon SageMaker Canvas, which takes past demand, pricing, and seasonal trends into account to provide the best possible profit margins.

AWS SageMaker provides pre-built algorithms that can be used to suggest various types of bikes to customers based on their profiles. This business can also retrieve the dataset, explore it, and get it available for model training using a SageMaker-enabled Jupyter notebook on the notebook instance. Data Wrangler, a great feature of Amazon SageMaker Studio, offers a complete solution for importing, preparing, transforming, formatting, and analyzing data. Your machine learning (ML) workflows can incorporate Data Wrangler data flow to make data pre-processing and feature engineering easier and more efficient while requiring very little coding.

Amazon Comprehend creates output that can be analyzed to better understand customer feedback from sources from which this company can gain a thorough understanding of its customers' opinions by using search filters and topics to categories documents. **"The Halifax Bike Rental Company"** can use Comprehend for semantic search, which can deliver a cutting-edge search experience, to grant your search engine access to entities, phrases, and sentiments. As a result, rather than using the articles' primary keywords, the search can concentrate on the context and intent of the articles.

References

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