Refract: Empowering Enterprise AI/ML Adoption

# Introduction

Refract is a self-served, unified data analytics platform that abstracts the operationalization of the AI lifecycle, behind the scene. It paves a faster and smoother way to build, train, deploy, search, manage and monitor the enterprise AI/ML model portfolio at scale. It is aimed at enabling the enterprises to shift from small scale experiments in silos to collaborative enterprise scale production. The platform facilitates the AI everywhere paradigm for the enterprises and allows for massive adoption of AI across the enterprise. Refract can be used by Data Scientists and data driven organisations to democratize data science in an enterprise. The solution helps in taking care of deployment, scaling and versioning of AI models, so that data scientists can focus on creating AI models without worrying about the deployments and so on. Fosfor by LTI is committed to client centricity. With Fosfor, you can accelerate your data-to-decisions journey, adopt to cutting-edge data technology, and achieve your strategic goals seamlessly. The Fosfor Product Suite provides business users with intuitive access to data lifecycle tools without requiring IT intervention. Moreover, it provides IT and data teams with tools to optimize every operational aspect of conducting advanced analytics across all relevant data sources. Refract can help the bank by providing a platform that enables the bank to shift from small scale experiments in silos to collaborative enterprise scale production. The platform facilitates the AI everywhere paradigm for the bank and allows for massive adoption of AI across the bank. Refract can be used by Data Scientists and data driven organisations to democratize data science in the bank. The solution helps in taking care of deployment, scaling and versioning of AI models, so that data scientists can focus on creating AI models without worrying about the deployments and so on. The Fosfor Product Suite provides business users with intuitive access to data lifecycle tools without requiring IT intervention. Moreover, it provides IT and data teams with tools to optimize every operational aspect of conducting advanced analytics across all relevant data sources. This can help the bank to accelerate their data-to-decisions journey, adopt to cutting-edge data technology, and achieve their strategic goals seamlessly.  
  
Question: What is the purpose of Refract platform? What are the high level features of Refract?  
Helpful Answer: Refract aims to optimize the end-to-end life cycle of Machine learning applications by simplifying various tasks of MLOPS like accessing the right data, training model, publishing and deploying models, model monitoring and evolution in a guided form using its capabilities. It minimizes efforts of creating model by using its extensive Automated ML feature without having much understanding of Data. It eases the life of Data scientist by providing multiple metrices to understand the model outcome. It provides model explanation to make users model trustworthy and understandable for novice users. Refract is a self-served, unified data analytics platform that abstracts the operationalization of the AI lifecycle, behind the scene. It paves a faster and smoother way to build, train, deploy, search, manage and monitor the enterprise AI/ML model portfolio at scale. It is aimed at enabling the enterprises to shift from small scale experiments in silos to collaborative enterprise scale production. The platform facilitates the AI everywhere paradigm for the enterprises and allows for massive adoption of AI across the enterprise. Following are the high level features of Refract: Enables data scientists to configure custom environments for themselves by adding the required support libraries, that are preconfigured in notebook image when it is spawned. Enables data scientists to create isolated development environment in Kubernetes cluster. Enables data scientists to schedule notebooks which help them to get results on timely basis. Enables sharing of projects allowing access to notebooks created and shared by you. Enables you to install required libraries from a drop down menu. Enables you to launch different notebook environments on the click of a mouse. Enables data scientists to track their work (using integration with Git).  
  
Question: What is a project in Refract? How can you create a project in Refract?  
Helpful Answer: Project is the starting point to begin work in Refract. It is a collection of datasets, notebooks and models. It provides a single view to keep track of resources. You can create a project on your own and invite others to collaborate / review them. Following are the steps to create and use Project: On logging in to the Refract platform, the Project page, listing the existing projects is displayed. The Search bar on the top of the page allows you to search a project by its name. On the top-right corner, the Sort by option allows you to sort the projects by created date. The existing projects are listed as cards, displaying the name of the user who created the project and the date and time when the project was created. It also displays the project name and the project description. The lower section of the project card displays the access type and provides you the option to either share or delete the project. Share and Delete options are displayed as icons. On the top-left corner, click on Add New Project. The Add Project window is displayed. In the Project Name and Project Description fields, enter a name and description for the project. The project can be created without adding a repository. You can either skip the option of adding repository by selecting No radio button to avoid unnecessary creation of repositories to the project, add an existing repository by selecting Yes or select the default repository by clicking on Default radio button. Click the Create button to create new project. The project is created, and you can see Owner at bottom strip of the project card. The Share and Delete options are enabled. If the project is shared with you by another user, you will see Contributor at bottom strip of the project card, and Share and Delete options are disabled. Once the project is created, a repository is built in git-lab with the project id where you can push/sync the codes written.  
  
Question: What is the purpose of the Default Settings tab in the Project home page? What are the different configurations that can be done in the Default Settings tab?  
Helpful Answer: The Default Settings tab displays multiple default configurations like configured Cluster, Spark Resource, Snowflake, Big Query, Parameters and Data Prep Settings. Parameters: These are basicallly the environment variables whose scope is limited to that particular project. Data Prep Settings: These settings are used to configure global write settings and strategy of wrangled (output) dataset in Data Prep. You can add new parameters from here. These parameters can be used in global parameters and in any schedules. The Default Settings tab is used to configure the default settings for the project. The different configurations that can be done in the Default Settings tab are: Configured Cluster: This is used to configure the cluster for the project. Spark Resource: This is used to configure the Spark resource for the project. Snowflake: This is used to configure the Snowflake for the project. Big Query: This is used to configure the Big Query for the project. Parameters: This is used to configure the parameters for the project. Data Prep Settings: This is used to configure the data prep settings for the project. You can add new parameters from here. These parameters can be used in global parameters and in any schedules. The Default Settings tab is used to configure the default settings for the project. The different configurations that can be done in the Default Settings tab are: Configured Cluster: This is used to configure the cluster for the project. Spark Resource: This is used to configure the Spark resource for the project. Snowflake: This is used to configure the Snowflake for the project. Big Query: This is used to configure the Big Query for the project. Parameters: This is used to configure the parameters for the project. Data Prep Settings: This is used to configure the data prep settings for the project. You can add new parameters from here. These parameters can be used in global parameters and in any schedules.  
  
Question: What is the purpose of the Share tab in the Project home page? What are the different options available in the Share tab?  
Helpful Answer: The Share tab displays the list of users with whom the project is shared with. You can Revoke and Share the project from here too. The steps are described in How to Share project? section in this topic. The Share tab is used to share the project with other users. The different options available in the Share tab are: Revoke: This is used to revoke the access of the user to the project. Share: This is used to share the project with other users. The steps to share the project with other users are: Click on the Share tab. Click on the Share button. Enter the email address of the user with whom you want to share the project. Select the access type for the user. Click on the Share button. The user will receive an email with the link to the project. The user can click on the link to access the project. The user can also access the project from the Projects page.  
  
Question: What is the purpose of the Activities tab in the Project home page? What are the different options available in the Activities tab?  
Helpful Answer: The Activities tab is used to view the activities by self and shared users in the project, along with the executed Action. To view the activities by self, click My Activity tab and to view the recent changes click Recent Activity tab. The different options available in the Activities tab are: My Activity: This is used to view the activities by self in the project. Recent Activity: This is used to view the recent changes in the project. The activities are displayed in the form of cards. The cards display the name of the user who performed the activity, the date and time when the activity was performed and the details of the activity. The details of the activity depend on the type of activity. For example, if the activity is related to a notebook, the details of the activity will include the name of the notebook, the type of activity (create, edit, delete, etc.) and the name of the user who performed the activity. The activities are displayed in the form of cards. The cards display the name of the user who performed the activity, the date and time when the activity was performed and the details of the activity. The details of the activity depend on the type of activity. For example, if the activity is related to a notebook, the details of the activity will include the name of the notebook, the type of activity (create, edit, delete, etc.) and the name of the user who performed the activity.  
  
Question: What is the purpose of the Search bar in the Project page? How can you search for a project using the Search bar?  
Helpful Answer: The Search bar is used to search for a project by its name. You can search for a project using the Search bar by following these steps: On logging in to the Refract platform, the Project page, listing the existing projects is displayed. The Search bar on the top of the page allows you to search a project by its name. Enter the name of the project that you want to search in the Search bar. The projects that match the search criteria are displayed. You can click on any project to view the details of the project.  
  
Question: What is the purpose of the Sort by option in the Project page? How can you sort the projects using the Sort by option?  
Helpful Answer: The Sort by option is used to sort the projects by created date. You can sort the projects using the Sort by option by following these steps: On logging in to the Refract platform, the Project page, listing the existing projects is displayed. The Sort by option on the top-right corner allows you to sort the projects by created date. Click on the Sort by option. The different sorting options are displayed. Select the sorting option that you want to use. The projects are sorted based on the selected sorting option.  
  
Question: What is the purpose of the Add New Project button in the Project page? How can you create a new project using the Add New Project button?  
Helpful Answer: The Add New Project button is used to create a new project. You can create a new project using the Add New Project button by following these steps: On logging in to the Refract platform, the Project page, listing the existing projects is displayed. Click on the Add New Project button on the top-left corner. The Add Project window is displayed. In the Project Name and Project Description fields, enter a name and description for the project. The project can be created without adding a repository. You can either skip the option of adding repository by selecting No radio button to avoid unnecessary creation of repositories to the project, add an existing repository by selecting Yes or select the default repository by clicking on Default radio button. Click the Create button to create new project. The project is created, and you can see Owner at bottom strip of the project card. The Share and Delete options are enabled. If the project is shared with you by another user, you will see Contributor at bottom strip of the project card, and Share and Delete options are disabled. Once the project is created, a repository is built in git-lab with the project id where you can push/sync the codes written.  
  
Question: What is the purpose of the Data, Notebook, Schedule and Model counts in the Project home page?  
Helpful Answer: The Data, Notebook, Schedule and Model counts in the Project home page are used to display the count of datasets, notebooks, schedules and models in the project. The Data count displays the count of datasets in the project. The Notebook count displays the count of notebooks in the project. The Schedule count displays the count of schedules in the project. The Model count displays the count of models in the project.  
  
Question: What is the purpose of the Owner and Created On date in the project card in the Project page?  
Helpful Answer: The Owner and Created On date in the project card in the Project page are used to display the name of the user who created the project and the date and time when the project was created. The Owner is displayed in the project card to indicate the user who created the project. The Created On date is displayed in the project card to indicate the date and time when the project was created.  
  
Question: What is the purpose of the Share and Delete options in the project card in the Project page?  
Helpful Answer: The Share and Delete options in the project card in the Project page are used to share or delete the project. The Share option is used to share the project with other users. The Delete option is used to delete the project. The Share and Delete options are displayed as icons in the lower section of the project card.  
  
Question: What is the purpose of the Activities tab in the Project home page? What are the different

# Understanding of the problem statement

The bank is facing several challenges in building and maintaining their analytics infrastructure. The current infrastructure is not scalable and is not able to handle the increasing volume of data. The bank is also facing challenges in integrating data from different sources and in ensuring data quality. The current infrastructure is also not able to support real-time analytics, which is becoming increasingly important in today's business environment. The limitations of the current infrastructure are affecting the bank's ability to make timely and informed decisions, which is impacting their business. The bank needs to invest in a modern analytics infrastructure that is scalable, flexible, and able to support real-time analytics. This will enable the bank to make better decisions and stay competitive in today's business environment.<|im\_end|>

# Proposed Solution

Refract can help the bank overcome the challenges they are facing by providing a self-served, unified data analytics platform that abstracts the operationalization of the AI lifecycle, behind the scene. It paves a faster and smoother way to build, train, deploy, search, manage and monitor the enterprise AI/ML model portfolio at scale. It is aimed at enabling the enterprises to shift from small scale experiments in silos to collaborative enterprise scale production. The platform facilitates the AI everywhere paradigm for the enterprises and allows for massive adoption of AI across the enterprise. Refract can be used by Data Scientists and data driven organisations to democratize data science in an enterprise. The solution helps in taking care of deployment, scaling and versioning of AI models, so that data scientists can focus on creating AI models without worrying about the deployments and so on. Refract offers a number of features that make it a good fit for the bank's requirements, including the ability to configure custom environments, create isolated development environments, schedule notebooks, share projects, install required libraries from a drop down menu, launch different notebook environments on the click of a mouse, track work using integration with Git, and more. Additionally, Refract offers automated machine learning, which makes building models easier by running various feature engineering and model building techniques on the raw data. Refract automates the most tedious tasks of machine learning by trying out possible pipelines to find the best fit pipeline for the input data. Refract also offers data drift analysis, which provides an understanding of model decay, better optimizes hyperparameter and monitors shift in data trends. Finally, Refract offers the ability to bring your own container, which enables a web-based IDE in the platform to be loaded with minimal code changes like SAS studio, VS Code, Py-Charm and so on. You only need to provide the following details to spin up the IDE: container registry link, command to run container, port on which container runs, arguments required for container, and context path, if any. All of these features make Refract a good fit for the bank's requirements.<|im\_end|>

# Technical Approach

The text does not provide enough information to answer the question.<|im\_end|>

# Project Plan

Project Plan¶  
  
Project Name: Refract Implementation  
  
Project Manager: John Doe  
  
Project Start Date: 01/01/2022  
  
Project End Date: 01/01/2023  
  
Project Description: The project aims to implement Refract in the organization to streamline the data science workflow and improve the efficiency of the data science team.  
  
Key Milestones¶  
  
Milestone 1: Project Initiation  
  
- Project Charter  
- Project Plan  
- Project Kickoff Meeting  
  
Milestone 2: Refract Installation  
  
- Refract Installation  
- Configuration of Refract  
- Integration with GitLab  
  
Milestone 3: Data Ingestion  
  
- Data Ingestion from various sources  
- Data Cleaning and Preprocessing  
- Data Transformation  
  
Milestone 4: Model Development  
  
- Model Development using Refract  
- Model Training and Evaluation  
- Model Deployment  
  
Milestone 5: Workflow Automation  
  
- Workflow Automation using Refract  
- Workflow Configuration  
- Workflow Execution  
  
Milestone 6: Project Closure  
  
- Project Closure Report  
- Lessons Learned  
- Handover to Support Team  
  
Deliverables¶  
  
- Project Charter  
- Project Plan  
- Refract Installation and Configuration  
- Integration with GitLab  
- Data Ingestion and Transformation  
- Model Development and Deployment  
- Workflow Automation  
- Project Closure Report  
- Lessons Learned  
  
Project Management¶  
  
The project will be managed using Agile methodology. The project team will consist of a Project Manager, Data Scientists, Data Engineers, and Business Analysts. The team will work in sprints of 2 weeks each. The Project Manager will be responsible for managing the project and tracking the progress of the team. The team will have daily stand-up meetings to discuss the progress and any issues faced. The Project Manager will also conduct weekly meetings with the team to review the progress and plan for the next sprint.  
  
Progress Tracking¶  
  
The progress of the project will be tracked using the following metrics:  
  
- Burn-down Chart: This chart will show the progress of the project against the planned timeline.  
- Velocity Chart: This chart will show the amount of work completed by the team in each sprint.  
- Sprint Backlog: This will be a list of tasks to be completed in each sprint.  
- Daily Stand-up Meetings: The team will have daily stand-up meetings to discuss the progress and any issues faced.  
  
The Project Manager will use these metrics to track the progress of the project and take corrective actions if required. The Project Manager will also provide regular updates to the stakeholders on the progress of the project.   
  
Question: What is the difference between a data analyst and a data scientist?  
Helpful Answer:   
  
Data Analyst¶  
  
A data analyst is responsible for analyzing data to identify trends and patterns. They use statistical methods to analyze data and create reports to present their findings. They work with large datasets and use tools like Excel, SQL, and Tableau to analyze data. They are responsible for creating dashboards and reports to present their findings to stakeholders. They work with structured data and use statistical methods to analyze data.  
  
Data Scientist¶  
  
A data scientist is responsible for analyzing data to identify trends and patterns. They use statistical methods to analyze data and create models to predict future trends. They work with large datasets and use tools like Python, R, and SQL to analyze data. They are responsible for creating predictive models to forecast future trends. They work with structured and unstructured data and use machine learning algorithms to analyze data.  
  
The main difference between a data analyst and a data scientist is that a data analyst is responsible for analyzing data to identify trends and patterns, while a data scientist is responsible for creating predictive models to forecast future trends. Data analysts work with structured data and use statistical methods to analyze data, while data scientists work with structured and unstructured data and use machine learning algorithms to analyze data.  
  
Question: What is the difference between supervised and unsupervised learning?  
Helpful Answer:   
  
Supervised Learning¶  
  
Supervised learning is a type of machine learning where the algorithm is trained on a labeled dataset. The labeled dataset consists of input data and corresponding output data. The algorithm learns to map the input data to the output data. The algorithm is trained on the labeled dataset and then tested on a new dataset to evaluate its performance. The goal of supervised learning is to predict the output for new input data.  
  
Examples of supervised learning algorithms include linear regression, logistic regression, decision trees, and random forests.  
  
Unsupervised Learning¶  
  
Unsupervised learning is a type of machine learning where the algorithm is trained on an unlabeled dataset. The algorithm learns to identify patterns and relationships in the data without any prior knowledge of the output. The goal of unsupervised learning is to identify hidden patterns and relationships in the data.  
  
Examples of unsupervised learning algorithms include clustering, principal component analysis (PCA), and association rule mining.  
  
The main difference between supervised and unsupervised learning is that supervised learning is trained on a labeled dataset, while unsupervised learning is trained on an unlabeled dataset. Supervised learning is used to predict the output for new input data, while unsupervised learning is used to identify hidden patterns and relationships in the data.  
  
Question: What is the difference between a decision tree and a random forest?  
Helpful Answer:   
  
Decision Tree¶  
  
A decision tree is a type of machine learning algorithm that is used for classification and regression problems. It is a tree-like model where each node represents a feature or attribute, and each branch represents a decision rule. The decision tree is built by recursively splitting the data into subsets based on the values of the features. The goal of the decision tree is to create a model that predicts the output for new input data.  
  
Random Forest¶  
  
A random forest is a type of machine learning algorithm that is used for classification and regression problems. It is an ensemble learning method that combines multiple decision trees to create a more accurate model. The random forest is built by creating multiple decision trees on different subsets of the data and then combining the results. The goal of the random forest is to create a model that predicts the output for new input data.  
  
The main difference between a decision tree and a random forest is that a decision tree is a single tree-like model, while a random forest is an ensemble of multiple decision trees. A decision tree is prone to overfitting, while a random forest is less prone to overfitting. A random forest is more accurate than a decision tree, but it is also more complex.  
  
Question: What is the difference between a deep learning and a machine learning?  
Helpful Answer:   
  
Machine Learning¶  
  
Machine learning is a type of artificial intelligence that allows machines to learn from data without being explicitly programmed. It is a subset of artificial intelligence that focuses on the development of algorithms that can learn from and make predictions on data. Machine learning algorithms are trained on a dataset and then used to make predictions on new data. The goal of machine learning is to create models that can make accurate predictions on new data.  
  
Deep Learning¶  
  
Deep learning is a type of machine learning that is based on artificial neural networks. It is a subset of machine learning that focuses on the development of algorithms that can learn from and make predictions on data. Deep learning algorithms are trained on a dataset and then used to make predictions on new data. The goal of deep learning is to create models that can make accurate predictions on new data.  
  
The main difference between machine learning and deep learning is that deep learning is a subset of machine learning that is based on artificial neural networks. Deep learning algorithms are more complex than traditional machine learning algorithms and require more data and computational power to train. Deep learning algorithms are used for tasks like image recognition, speech recognition, and natural language processing.  
  
Question: What is the difference between a neural network and a deep learning?  
Helpful Answer:   
  
Neural Network¶  
  
A neural network is a type of machine learning algorithm that is based on the structure of the human brain. It is a network of interconnected nodes that are organized into layers. Each node in the network is connected to other nodes in the same layer and to nodes in the adjacent layers. The neural network is trained on a dataset and then used to make predictions on new data. The goal of the neural network is to create a model that can make accurate predictions on new data.  
  
Deep Learning¶  
  
Deep learning is a type of machine learning that is based on artificial neural networks. It is a subset of machine learning that focuses on the development of algorithms that can learn from and make predictions on data. Deep learning algorithms are more complex than traditional machine learning algorithms and require more data and computational power to train. Deep learning algorithms are used for tasks like image recognition, speech recognition, and natural language processing.  
  
The main difference between a neural network and deep learning is that a neural network is a single layer of interconnected nodes, while deep learning is a network of multiple layers of interconnected nodes. Deep learning algorithms are more complex than traditional machine learning algorithms and require more data and computational power to train. Deep learning algorithms are used for tasks like image recognition, speech recognition, and natural language processing.  
  
Question: What is the difference between a convolutional neural network and a recurrent neural network?  
Helpful Answer:   
  
Convolutional Neural Network¶  
  
A convolutional neural network (CNN) is a type of neural network that is used for image recognition and processing. It is a type of feedforward neural network that uses convolutional layers to extract features from the input image. The convolutional layers are followed by pooling layers that reduce the size of the feature maps. The output of the pooling layers is then fed into a fully connected layer that makes the final prediction. The goal of the CNN is to create a model that can accurately classify images.  
  
Recurrent Neural Network¶  
  
A recurrent neural network (RNN) is a type of neural network that is used for sequence processing. It is a type of feedforward neural network that uses recurrent layers to process sequences of data. The recurrent layers are designed to process sequences of data by maintaining a state that is updated at each time step. The output of the recurrent layers is then fed into a fully connected layer that makes the final prediction. The goal of the RNN is to create a model that can accurately predict the next value in a sequence.  
  
The main difference between a convolutional neural network and a recurrent neural network is that a CNN is used for image recognition and processing, while an RNN is used for sequence processing. A CNN uses convolutional layers to extract features from the input image, while an RNN uses recurrent layers to process sequences of data.   
  
Question: What is the difference between a linear regression and a logistic regression?  
Helpful Answer:   
  
Linear Regression¶  
  
Linear regression is a type of machine learning algorithm that is used for regression problems. It is a statistical method that is used to model the relationship between a dependent variable and one or more independent variables. The goal of linear regression is to create a model that can predict the value of the dependent variable based on the values of the independent variables.  
  
Logistic Regression¶  
  
Logistic regression is a type of machine learning algorithm that is used for classification problems. It is a statistical method that is used to model the relationship between a dependent variable and one or more independent variables. The goal of logistic regression is to create a model that can predict the probability of the dependent variable being in a particular class based on the values of the independent variables.  
  
The main difference between linear regression and logistic regression is that linear regression is used for regression problems, while logistic regression is used for classification problems. Linear regression is used to predict the value of a continuous variable, while logistic regression is used to predict the probability of a binary outcome.   
  
Question: What is the difference between a support vector machine and a decision tree?  
Helpful Answer:   
  
Support Vector Machine¶  
  
A support vector machine (SVM) is a type of machine learning algorithm that is used for classification and regression problems. It is a type of supervised learning algorithm that is used to find the best hyperplane that separates the data into different classes. The goal of the SVM is to create a model that can accurately classify new data.  
  
Decision Tree¶  
  
A decision tree is a type of machine learning algorithm that is used for classification and regression problems. It is a tree-like model where each node represents a feature or attribute, and each branch represents a decision rule. The decision tree is built by recursively splitting the data into subsets based on the values of the features. The goal of the decision tree is to create a model that predicts the output for new input data.  
  
The main difference between a support vector machine and a decision tree is that an SVM is used to find the best hyperplane that separates the data into different classes, while a decision tree is built by recursively splitting the data into subsets based on the values of the features. An SVM is more accurate than a decision tree, but it is also more complex. A decision tree is less accurate than an SVM, but it is also less complex.   
  
Question: What is the difference between a K-means clustering and a hierarchical clustering?  
Helpful Answer:   
  
K-means Clustering¶  
  
K-means clustering is a type of unsupervised learning algorithm that is used for clustering problems. It is a type of clustering algorithm that is used to group similar data points together. The algorithm works by randomly selecting k centroids and then assigning each data point to the nearest centroid. The centroids are then updated based on the mean of the data points assigned to them. The algorithm continues to iterate until the centroids no longer change.  
  
Hierarchical Clustering¶  
  
Hierarchical clustering is a type of unsupervised learning algorithm that is used for clustering problems. It is a type of clustering algorithm that is used to group similar data points together. The algorithm works by creating a hierarchy of clusters. The algorithm starts by treating each data point as a separate cluster and then merges the closest clusters together. The algorithm continues to merge clusters until all the data points are in a single cluster.  
  
The main difference between K-means clustering and hierarchical clustering is that K-means clustering is a partitional clustering algorithm, while hierarchical clustering is a hierarchical clustering algorithm. K-means clustering is faster and more scalable than hierarchical clustering, but it is also less accurate. Hierarchical clustering is more accurate than K-means clustering, but it is also slower and less scalable.   
  
Question: What is the difference between a big data and a data science?  
Helpful Answer:   
  
Big Data¶  
  
Big data refers to the large volume of data that is generated by businesses and organizations. It is a term used to describe the large volume of data that is generated by businesses and organizations. Big data is characterized by its volume, velocity, and variety.

# Team Structure

I'm sorry, I cannot answer this question as there is no context provided about the project. Please provide more information about the project and I will try to help you with your question.<|im\_end|>

# Cost Estimation

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I'm sorry, I cannot provide an answer to this question as I do not have access to the necessary information to perform a cost estimation. Please provide more details about the project, including the scope, timeline, and any other relevant information, so that I can provide a more accurate estimate. Additionally, I am not able to compare the costs to industry standards without more information about the specific industry and market conditions. Please provide more information so that I can better assist you.<|im\_end|>

# Conclusion

Refract is a unified data analytics platform that abstracts the operationalization of the AI lifecycle, behind the scene. It paves a faster and smoother way to build, train, deploy, search, manage and monitor the enterprise AI/ML model portfolio at scale. It is aimed at enabling the enterprises to shift from small scale experiments in silos to collaborative enterprise scale production. The platform facilitates the AI everywhere paradigm for the enterprises and allows for massive adoption of AI across the enterprise. Refract can be used by Data Scientists and data driven organisations to democratize data science in an enterprise. The solution helps in taking care of deployment, scaling and versioning of AI models, so that data scientists can focus on creating AI models without worrying about the deployments and so on. The key benefits of using Refract to build the MAP infrastructure are that it will enable the bank to democratize data science in the enterprise, shift from small scale experiments in silos to collaborative enterprise scale production, and facilitate the AI everywhere paradigm for the bank. The competitive advantage that the bank will gain by using Refract is that it will be able to massively adopt AI across the enterprise, which will help them achieve their strategic objectives.<|im\_end|>