

RFPNo.KAAS/202324/ML/2054

Dated : 07.08.2023



REQUEST FOR PROPOSAL (RFP) DOCUMENT

FOR

ML SOLUTION

KAAS TECHNOLOGY, TAMILNADU

PSG TECHNOLOGY, COIMBATORE – 641407, TAMILNADU, INDIA

NOTICE INVITING RFP/EOI for ML SOLUTION

Quotation

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Date:	
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Customer ID:	
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Company Name:
Name:
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Item#	Description	Quantity	Unit Price	Discount %	Total

Notes or Special Comments:

Sub Total:	
Tax:	
Tax Rate:	
Shipping:	
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We will be happy to supply any further information you may need and trust that you call on us to fill your order, which will receive our prompt and careful attention.

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RFPNo.KAAS/2023-24/ML/2054

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Selection of Firm/Vendor for design, development, implementation of machine learning models supports of Machine learning (ML) solution Technology for KT, Tamil Nadu.

1. Introduction

- Introduction KAAS TECHNOLOGY, Tamil Nadu is an Institute of National Importance set up by the Department for Data Analytics and Next Gen ML (DANGML), GOVT. OF INDIA and has its own campus at Chennai, Bangalore, New York intends to deploy a comprehensive, structured, and total software solution as a platform for managing and automating its activities in order to develop the next Generation of INDIA.

2. Scope of Work

- The scope of work involves creating an advanced software solution using machine learning to automate candidate interview selection. The goal is to develop a system that analyzes historical candidate data and interview performance to predict the best candidates for interviews.

3. Technical Requirements

- **Instant Notifications:** Develop a mechanism for immediate notifications to be sent to both candidates and our organization upon the submission of a job application.
- **Automated Confirmations:** Design an automated email confirmation system that notifies candidates about the successful submission of their application.
- **Organizational Notifications:** Create a system to alert designated personnel within our organization about new candidate applications, ensuring timely responses.
- **Streamlined Scheduling:** Implement a feature that suggests interview date options based on candidate availability and allows candidates to schedule interviews seamlessly.
- **Real-Time Communication:** Establish a platform for candidates to make inquiries about roles or interviews, with our team responding promptly for increased transparency.
- **Security Measures:** Ensure stringent security by implementing a two-tier authentication access system to protect sensitive candidates and organizational data.

4. Data Collection:

- **1.Identify Relevant Data Points:** Determine the data needed, such as candidate profiles, application timestamps, interview preferences, communication history, job positions, interview panels, and outcomes.

- **2. Access Data Sources:** Gather data from existing databases, HR systems, and application forms. Ensure data quality and accuracy.
- **Anonymize PII:** Protect privacy by anonymizing personally identifiable information (PII) to maintain confidentiality.

5. Data Preprocessing:

- **Data Cleaning:** Detect and address missing or inaccurate data. Handle outliers and anomalies appropriately.
- **Data Transformation:** Convert data into suitable formats. This includes converting categorical variables, standardizing units, and normalizing numerical values.
- **Feature Extraction:** Identify and extract relevant features that contribute to model accuracy. This involves selecting attributes such as application date, interview preferences, and communication history.
- **Data Integration:** Merge datasets from various sources to create a unified dataset for analysis.
- **Data Splitting:** Divide the dataset into training, validation, and testing subsets to assess model performance accurately.
- **Data Security Measures:** Implement encryption and access controls to ensure data security. This includes protecting both candidate and organizational data.
- **Documentation:** Maintain detailed records of data sources, preprocessing steps, and transformations for transparency and reproducibility.

6. Model Development:

The machine learning model's development should encompass the following steps:

- **Feature Selection:** Determine key features and attributes relevant to candidate selection, such as application data, interview preferences, and historical performance.
- **Data Preparation:** Process and preprocess the collected data, ensuring it's ready for training.
- **Algorithm Selection:** Choose suitable machine learning algorithms, such as decision trees or neural networks, based on the nature of the data and the problem.
- **Model Training:** Train the selected algorithms using the preprocessed data to enable the model to learn from patterns and relationships.
- **Hyperparameter Tuning:** Fine-tune model parameters to optimize its performance and accuracy.
- **Validation:** Evaluate the model's performance using validation datasets to ensure it's generalizing well.
- **Model Optimization:** Refine the model based on validation results to enhance its predictive capabilities.

7. Evaluation Metrics:

- Define the evaluation metrics that will be used to measure the performance of the machine learning model. Specify the desired accuracy, precision, recall, or other relevant metrics.
- Accuracy: The percentage of predictions that are correct.
- Precision: The percentage of positive predictions that are positive.
- Recall: The percentage of actual positives that are predicted as positive.
- F1 score: A weighted average of precision and recall.

8. User Interface and Experience:

- The interface should be easy to use and navigate. The candidate should be able to easily find the information they need and complete the interview process without any difficulty.
- The interface should be visually appealing and engaging. The candidate should be interested in using the interface and should not be bored or frustrated by it.
- The interface should be secure. The candidate's personal information should be protected and should not be accessible to unauthorized users.
- The interface should be interactive. The candidate should be able to interact with the interface and provide feedback. This will help to improve the model and make it more accurate.
- A welcome message that introduces the candidate to the process and explains what they will need to do. A list of instructions that the candidate can follow to complete the interview process.
- A progress bar that shows the candidate how far they are through the process. A feedback form that the candidate can use to provide feedback on the process. A button that the candidate can click to submit their answers.

9. Integration:

- The model should be integrated with the existing applicant tracking system (ATS). This will allow the model to access the candidate's resume and other application materials.
- The model should be integrated with the video conferencing software. This will allow the model to conduct interviews with candidates.
- The model should be integrated with the feedback system. This will allow candidates to provide feedback on the interview process.
- The model should be integrated with the reporting system. This will allow the company to track the performance of the model and make necessary adjustments.

10. Scalability and Performance:

- The model should be scalable. This means that the model should be able to handle the volume of traffic that is expected. For example, if the company expects to receive many applications, the model should be able to handle the load without slowing down or crashing.
- The model should be performant. This means that the model should be able to provide results in a timely manner. For example, if the company wants to be able to make hiring decisions quickly, the model should be able to provide results within a few minutes.
- The model should be reliable. This means that the model should be able to provide accurate results consistently. For example, the company should not want to rely on a model that is only accurate 50% of the time.

11. Deployment and Maintenance:

- The model should be deployed in a production environment. This means that the model should be available to users 24/7.
- The model should be monitored to ensure that it is performing as expected. This includes monitoring the model's accuracy, performance, and availability.
- The model should be regularly updated to improve its accuracy and performance. This can be done by retraining the model with new data or by fine-tuning the model's parameters.
- The model should be backed up regularly to protect it from data loss. The model should be documented so that it can be easily understood and maintained.

12. Security and Privacy:

- The model should be hosted on a secure server. This means that the server should be protected from unauthorized access.
- The model's data should be encrypted. This means that the data should be scrambled so that it cannot be read by unauthorized users.
- The model should be regularly monitored for security vulnerabilities. This will help to identify and fix any security flaws that may exist.
- The model should be compliant with all applicable regulations. This means that the model should be used in a way that complies with the law.

13. Timeline:

- The project should be completed within a reasonable timeframe.
- The project should be broken down into smaller tasks that can be completed in a timely manner.
- The project should have milestones that can be used to track progress.
- The project should have a contingency plan in case of delays.