AI Models Recommendation System

Arsh Chandrakar, Ruchir Hivarekar & Arya Belhe

Information Systems, Syracuse University

IST 659_M005: Data Admin Concepts and Database Management

Vincent Plaza

February 09, 2024

Project Proposal: AI Models Recommendation System

Introduction

In today's landscape, harnessing the power of artificial intelligence (AI) is essential for boosting productivity and efficiency. However, selecting the right AI models can be challenging for individuals and organizations alike. To address this issue, we propose the development of an AI Models Recommendation System. This system will offer personalized recommendations customized to the unique requirements of clients, from individuals embarking on personal projects to organizations seeking productivity enhancements.

Article Review

Nowadays, the understanding and usage of AI models in the world has increased exponentially. Recently, IBM and MIT worked together to develop something called saliency cards that aid users in selecting appropriate techniques for interpreting machine learning model predictions (Adam Zewe, 2023). Saliency techniques provide insight into complex model decisions, but selecting the right one can be challenging due to the array of options available. Also, a study done in analysis of generative AI covering various models, input-output formats, and evaluation metrics extends to the development of an AI model recommendation system, as it enables systematic characterization and benchmarking of AI models (Ajay Bandi, 2023). Such a system can match generating approaches to user requirements and application demands, providing tailored recommendations and facilitating decision-making based on performance limitations, intended outputs, and data input types. In our assessment of this recommendation systems, it's

crucial to integrate insights from recent research on AI governance, particularly concerning large-scale generative AI models like ChatGPT. The research emphasizes the necessity of tailored regulations and delineated responsibilities across the AI value chain, advocating for measures such as content filtering, non-discrimination audits, and transparent risk management to address ethical concerns (Philipp Hacker, Andreas Engel & Marco Mauer, 2023). In conclusion, by compiling the insights from studies on AI governance, generative AI analysis, and tool development such as nat.dev (Jim Luhrs, 2023), AI model recommendation systems can serve as important guides for users across various domains. As we advance, it is crucial to continue refining these systems to align with evolving regulatory frameworks, user needs, and technological advancements, ultimately fostering a more transparent, accountable, and inclusive AI ecosystem.

Project Proposal

Problem Statements

Selecting suitable AI models is fraught with complexities, including cost considerations, management overhead, model complexity, and the need for reliable customer support and maintenance services. Without guidance, clients struggle to identify AI models that align with their needs and constraints.

Objectives

Our objectives with the AI Models Recommendation System are to:

- Simplify AI model selection through personalized recommendations.
- Offer cost-effective solutions optimizing productivity.
- Ensure easy management, minimal complexity, and reliable customer support for recommended AI models.

Methodology

We will adopt the Agile methodology to efficiently manage our project timeline of 3-4 months. Agile principles will allow us to adapt to evolving requirements and deliver incremental value to our clients. Continuous feedback loops will ensure alignment with client expectations and industry best practices.

System Architecture

The system will comprise:

- User interface for inputting requirements and preferences.
- Recommendation engine driven by machine learning algorithms.
- Integration with third-party platforms for AI model access and management.
- Backend infrastructure for data processing and recommendation generation.

Features and Benefits

Key features include:

- Intuitive interface for listing requirements.
- Personalized recommendations based on client needs.
- Cost-effective solutions maximizing ROI.
- Simplified management and support for recommended AI models.

Implementation Plan

We have three milestones with the following deadlines:

- Milestone 1: February 9th Focus on project requirements, conceptual, and logical data models alongside the project proposal.
- Milestone 2: March 8th Development and testing phase.
- Milestone 3: April 12th Final testing, deployment, and project delivery.

Evaluation and Testing

Performance will be evaluated using metrics such as recommendation accuracy, client satisfaction, and cost-effectiveness. Rigorous testing procedures, including unit testing and user acceptance testing, will validate system functionality and reliability.

Conclusion

The AI Models Recommendation System represents a significant advancement in simplifying AI model selection. By providing personalized recommendations, we empower clients to maximize productivity and efficiency. We look forward to delivering a system that meets and exceeds client expectations.

References

Zewe, A. (2023, May 31). New tool helps people choose the right method for evaluating AI models. MIT News.

https://news.mit.edu/2023/new-tool-helps-people-choose-right-method-evaluating-ai-models-0531

Bandi, A. (2023, July 31). The Power of Generative AI: A Review of Requirements, Models, Input—Output Formats, Evaluation Metrics, and Challenges. MDPI.

https://www.mdpi.com/1999-5903/15/8/260

Hacker, P., Engel, A. & Mauer, M. (2023). Regulating ChatGPT and other Large Generative AI Models. arXiv.

https://dl.acm.org/doi/pdf/10.1145/3593013.3594067

Luhrs, J. (2023, March 13). Comparing AI Models The Easy Way. Medium.

https://web3jim.medium.com/comparing-ai-models-the-easy-way-a38cfc5b32c2