BETTER HEALTH AI

IMPROVING QUALITY OF CARE BY ONE MODEL AT A TIME

Brahma Sen

May 3, 2024

INTRODUCTION

EXPLORES AND RECOMMENDS ALTERNATIVE PAYMENT MODEL (APM) AND VALUE BASED CARE (VBC) MODELS THAT TIES PAYMENT TO HEALTH OUTCOMES.

THIS IS A REAL-WORLD PROJECT THAT WE ARE EXPLORING USING AI/GPT/RAG TOOLS TO DETERMINE ITS EFECTIVENESS AND USAGE IN THE PROJECT.
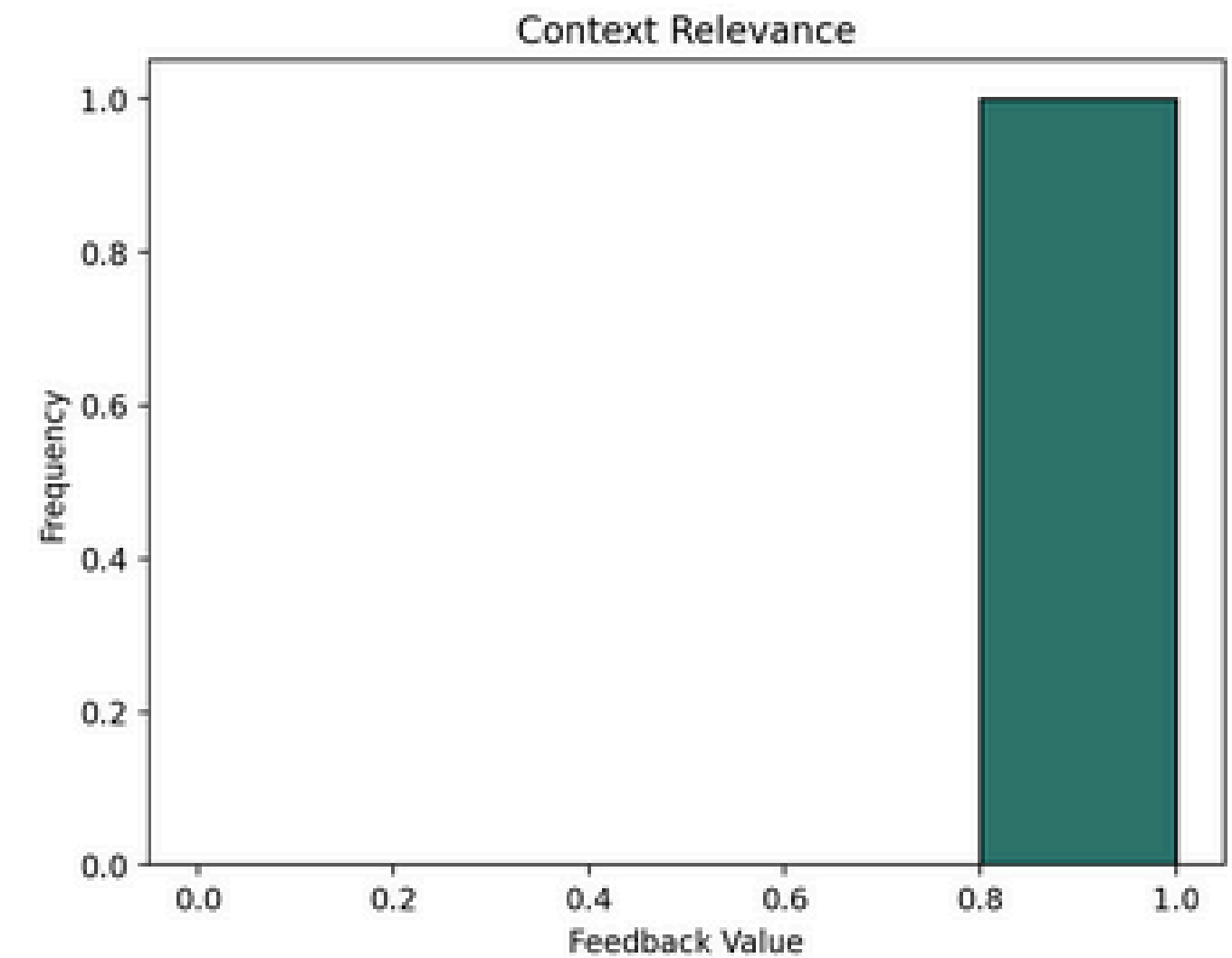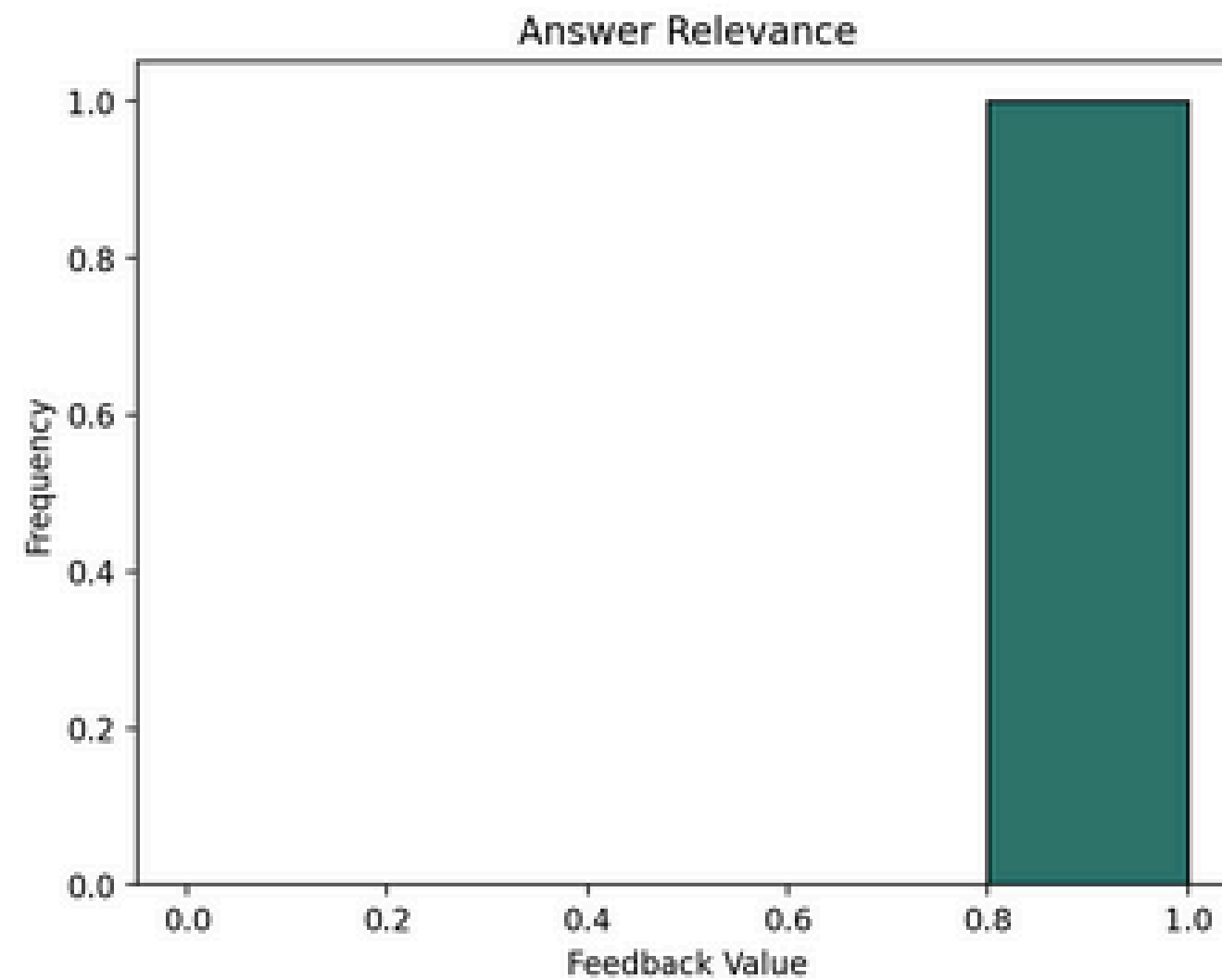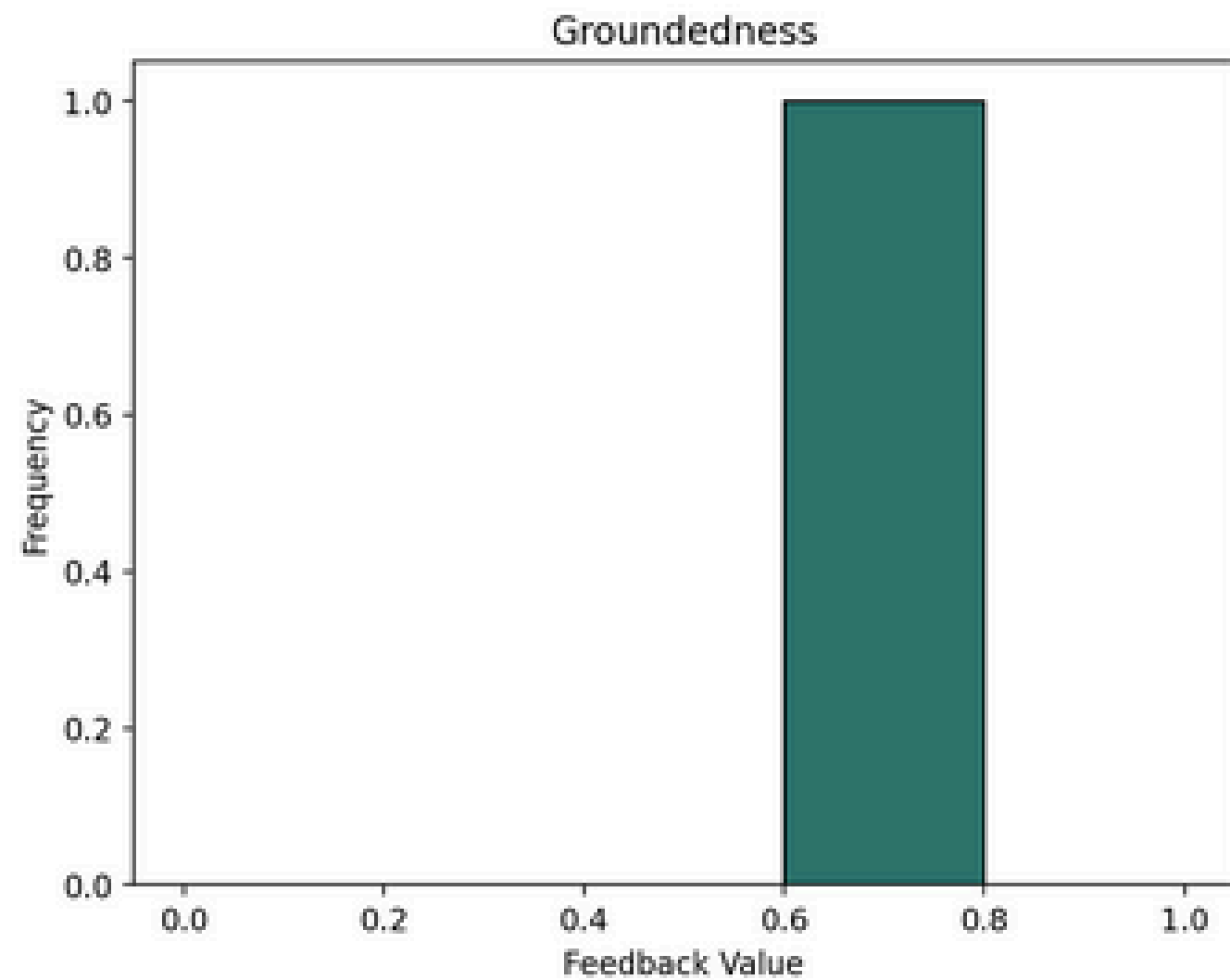
EXPLAIN TECH

USED OPENAI ASSISTANT, LLAMAINDEX, TRULENS TO REVIEW PUBLICATIONS, REPORTS, ARTICLES IN THE APM/VBC DOMAIN AND USE THE RAG TECHNIQUE TO ANSWER ANY SPECIFIC QUESTIONS REGARDING IMPLEMENTATION AT THE STATE AND COMMUNITY LEVEL.

USING OPENAI ASSISTANT AND TRULENS

OpenAI Assistant RAG

Records   Feedback Functions

ANSWER USING OPENAI ASSISTANT AND TRULENS

Response

[`Select.RecordInput`]

is the most successful Alternative Payment Models?

Response [`Select.RecordOutput`]

"The document highlights several successful Alternative Payment Models (APMs), each demonstrating various degrees of success in terms of savings and improved healthcare quality. W it does not explicitly rank these models by success, the **Medicare Prior Authorization Model: Repetitive Scheduled Non-Emergent Ambulance Transport (RSNAT) Model** stands out with $1 billion in total Medicare savings among beneficiaries, marking a significant impact on Medicare spending and demonstrating effectiveness in reducing unnecessary use of services while maintaining quality of care 【8†source】.

Another notable example is the **Home Health Value-Based Purchasing (HHVBP) Model**, which reported cumulative net savings of $949 million in its first five years and led to notable higher qu care in home health agencies within model states compared to non-model states 【8†source】.

Given the information on savings, quality improvement, and impact on healthcare utilization, bo the RSNAT and HHVBP models can be considered among the most successful APMs described in document. However, determining the most successful APM would depend on the specific criteria used for success, such as financial savings, quality of care improvements, or scalability."

ANSWERS FOR 2 QUERIES USING LLAMAINDEX

```
Query 1 : List successful Alternative Payment Models?
Answer for Query 1 using hybrid Retriver and Post processing: The Pioneer ACO Model, The MDAPM Model, The Comprehensive Care for Jo
int Replacement (CJR) Model, The Comprehensive End-Stage Renal Disease (ESRD) Care (CEC) Model, The Oncology Care Model (OCM), The
Million Hearts®: Cardiovascular Disease Risk Reduction Model.



Query 2: What is the most successful Alternative Payment Model?
Answer for Query 2 using hybrid Retriver and Post processing: The most successful Alternative Payment Model is the Pioneer ACO Mode
l.
```

CLOSING THOUGHTS

WE EXPLORED OPENAI ASSISTANT, LLAMAINDEX AND REVIEWED ANSWERS TO THE SAME QUESTIONS USING BOTH ENVIRONMENTS. WE USED TRULENS DASHBOARD TO REVIEW GROUNDNESS, ANSWER RELEVANCE AND CONTEXT RELEVANCE SCORES. AT FIRST BLUSH, OPENAI ASSISTANT SEEMED TO PERFORM BETTER WITH THE SCORES AND QUALITY OF ANSWER RETURNED. BUT, WE HAD ONLY THE VERY BASIC SETUP WITH LLAMAINDEX AND MONGODB. WE HAVE NOT EXPLORED ALL OF THEIR SETUP AND FEATURES.

WE ARE COMMITTED TO PUSHING IT FURTHER, REDUCE HALLUCINATION, EXPERIMENT WITH VARIOUS APPROACHES AND GET IT AS CLOSE AS TO THE HUMAN LEVEL POSSIBLE.