Individual Contribution

Ailin Chu: Rate prediction improvement and reasoning. Ailin improved the accuracy of the rate prediction model, tuning parameters, and refining data inputs. She also provided clear reasoning and analysis to justify the improvements made, and supported integration of these predictions into the question-answering system. Her work is demonstrated through the function `ml_predict_rotten_tomatoes(params)` and related test queries. She also prepared and refined the reading script and slides for the presentation, and recorded the video.

Adam Kim: Overall evaluation of the project and API pipeline. Instead of BLEU which felt weak compared to direct human evaluation, Adam contributed by refining data processing logic, assembling and testing the end-to-end query handling pipeline. He worked on the `answer_question(user_query)` function, which orchestrates API calls, movie similarity metrics, rate prediction, and knowledge graph queries into final user responses. Adam also contributed to designing test cases and user queries, verifying that system outputs made sense logically.

Qin Xiao: Revenue prediction improvement and reasoning. Xiao worked on enhancing the revenue prediction models, exploring different regression techniques, and offering detailed reasoning to explain model adjustments and their impact. Additionally, Xiao contributed to concept parsing and knowledge graph querying that fed into revenue-related reasoning, through functions like `query_knowledge_graph(concepts)` and `call_api(user_request)`.

Weihao He: Movie similarity-related improvement and reasoning. Weihao focused on improving the movie similarity algorithms, refining feature representations, and providing strong reasoning to explain similarity patterns and their effect on recommendation quality. He contributed to functions such as `cosine_similarity(vec1, vec2)` and `query_vector_store(movie_title_or_description, top_k=3)`. He also helped generate and use random `description_embedding` vectors for each movie to simulate embedding-based similarity logic.