FIN 473 – Principles of Real Estate

Group AI Assignment 3

Real Estate Listings

This AI assignment must be done as a group, and all group members (unless there are unusual circumstances) will receive the same grade. The assignment must be uploaded to the D2L folder by the due date listed on the course schedule. Use the following title: "FIN 473 AI Ass. 3, Group X". Upload ONLY ONE assignment per group. All prompts (including the names of the AI models used) and (unedited) completions should be included in an appendix.

AI Assignment 3: Real Estate Listings

Assignment Overview

In this assignment, you will explore the application of Generative AI (GenAI) models in real estate market analysis. You'll use a GenAI tool to extract and analyze key information from real estate listings, demonstrating the potential of AI in financial decision-making processes.

Instructions

1. Data Collection

   - Collect 50-100 real estate listings from a specific geographic area.
   - Ensure the listings include a mix of property types (e.g., residential, commercial, multi-family).
   - Create a spreadsheet with links to each listing.

2. GenAI Prompt Engineering

- Develop a series of prompts for the GenAI model to extract the following information from each listing:
  - Property type
  - Square footage
  - Number of bedrooms and bathrooms
  - Lot size
  - Year built
  - Asking price
  - Estimated monthly rental income (if available)
  - Key features or amenities
  - Proximity to schools, shopping, or other points of interest
- Test your prompts on 5 sample listings and refine as necessary.

3. Data Extraction and Compilation

- Use your refined prompts to extract information from all listings in your dataset.
- Compile the extracted data into a structured format in your spreadsheet.
- Note any inconsistencies or challenges in the AI's ability to extract information.

4. Data Analysis

- Calculate key real estate metrics using the extracted data:
  - Price per square foot
  - Capitalization rate (for properties with rental income data)
  - Price-to-rent ratio (for residential properties)
- Use the GenAI model to generate a brief market analysis for each property, including its investment potential and any red flags.

5. Critical Evaluation

- Write a report addressing the following:
  - The effectiveness of the GenAI model in extracting accurate information
  - Challenges and limitations encountered during the process
  - Potential biases or errors in the AI-generated analyses
  - The value of AI-assisted analysis in real estate investment decision-making
  - Recommendations for improving the process or expanding its application