

Test Overview

Use the attached excel to run queries to produce the following analysis. Please use any language possible and return your results in a document, or a slide deck. Please look to invest no more than 3 hours on these tasks

From the attached excel Sheet (Performance Data.xlsx) compute the following:

1. Renewal rent growth
2. Understanding lease terms
3. Any 'dodgy' behavior by users based on what the machine /software recommended and what they decided to offer to their residents
4. Renewal probability and rent growth relationships
5. Segment and rank order properties based on which renters are likely to renew most with 3-4 columns of data about these properties. Choose any columns you think are relevant to tell the story about why these properties may have people more likely to renew than others

In addition to the above, please perform the following task (code) as Python or SQL queries or VLOOKUPS and return your logic as pasted code

The following are 2 example database tables, with some questions below .

Table 1

| Tenant_Code | Property_Code | Rent | Offer_Cycle |
|-------------|---------------|------|-------------|
| abc_123 | 445 | 1050 | 01-01-2022 |
| abc_123 | 445 | 1030 | 02-01-2022 |
| edf_234 | 445 | 1000 | 02-01-2022 |
| asd_999 | 555 | 750 | 02-01-2022 |

Table 2

| t_code | Renewal_Probability | Lease_End_Date | OfferCyc |
|---------|---------------------|----------------|------------|
| abc_123 | 60 | 02-01-2022 | 01-01-2022 |
| abc_123 | 65 | 12-01-2022 | 02-01-2022 |
| edf_234 | 57 | 06-01-2022 | 02-01-2022 |

Note:

- Please refer to the tables as 'table_1' and 'table_2' in your queries.
- All dates are formatted as MM-DD-YYYY

Tasks to be completed

1. Get all distinct tenant codes from 'table_1'
2. Get the average rent for property 445.
3. Get the average renewal probability for property 445.
4. Return a table with columns ['Tenant_Code', 'Property_Code', 'Rent', 'Renewal_Probability' and 'Offer_Cycle'] using an INNER JOIN.
5. Assuming the current date is 06-01-2022, return the total number of leases expiring on or before the current date for the offer cycle at 02-01-2022.

Business Background

- This is a data export for a group of properties' leasing data. The properties in this instance have a name, property ID, and are apartments (flats) which have renters (residents/ tenants) living inside them with a Tenant_Code
- These renters have leases signed with the company that owns them. The dataset provided has performance data of a price optimization software platform.
- The software platform analyses renewal probability of each resident at the Offered rent, and monitors Achieved Rent. The users of the software can Approve, Override the platform.
- There is an offer cycle, that is, renewal offers are sent in a batch of renewals and not everyday.
- Some residents are on MTM (month to month) leases and others are on leases between 3-18 month duration which the landlord and Beekin's software offers and optimizes for.
- The software platform also provides a Renewal Probability for a resident based on multiple factors, and generates renewal price (offers) based on terms (duration of leases) which can range from 3 months to 18 months and the resident has a choice to pick one
- In-place Rent is current rent that a resident is paying (these are existing customers who are about to renew their leases). We also have data on contemporary market rent, which is the rent of other properties around where the resident lives.

Below is a detailed data dictionary. Please make assumptions where needed.

Data Dictionary

| | |
|-------------------------|--|
| Tenant_Code | Unique id within the property |
| OfferCycle | Code given by Beekin to identify which cycle offer was made. |
| Lease_From_Date | Date the offered leases started |
| Terms | An array of all the lease terms Beekin offered |
| Rents | An array of all the lease rents that were finalised after edits by users |
| BeekinOfferRents | An array of all the lease terms the software originally offered |
| RenewalProbabilities | An array of all the renewal probabilities for the Beekin offers |
| IsUpdateds | An array of whether Rent = BeekinOfferRents (ie whether beekin offer was edited) |
| IsApprovals | An array of whether the offer generated was Approved by user |
| Excludes | An array of whether the offer was excluded |
| Uploads | An array of whether the data was uploaded |
| Property_Code | Property where tenant lives |
| Unit_Code Unit | Unit or apartment where tenant lives |
| Move_In_Date | Move in date of tenant |
| Move_Out_Date | Move out date of tenant (if missing, can assume tenant still stays) |
| Notice_Date Date | tenant intends to move out, if they have given their notice to vacate. |
| Current_Lease_From_Date | These refer to the current lease ON THE DATE THIS |

NOTEBOOK IS RUN

Current_Lease_To_Date > (or last lease if no longer a tenant).



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Current_Rent / NOT the pre renewal lease, nor necessarily the post renewal lease.

Current_Status Status of renter's lease. Either Past (moved out) Notice (moving out) or

Current (still there)

Dates Date that events recorded in Events are supposed to happen.

DateOccurs Date that events recorded in Events were recorded (usually same as
Dates).

Events A record of all Renewals (or canceled renewals) or transitions to MTM
for a tenant

DateLeaseFroms The lease start date for the active lease at the time of the event in
Events

DateLeaseTos The lease end date for the active lease at the time of the event in Events

RentRecord The lease rent for the active lease at the time of the event in Events

MTMs Whether a MTM was recorded at the time of the event.

UserName If there was a flag, the user name of the person who created the flag

Resolved If there was a flag, whether the flag was resolved

Comments If there was a flag, the message that came with the flag

isCommentDeleted If there was a flag, had the comment been deleted?

ProposalRents If there is proposal matching this tenant, what are the rents in that
proposal

ProposalTerms If there is proposal matching this tenant, what are the terms in that
proposal



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Proposal_dates If there is proposal matching this tenant, what dates were those

proposals made

ProposalStatuses If there is proposal matching this tenant, what are the statuses of those

proposals

isEmployee Whether the offer was made to someone who is receiving the crc

employee concession

ContemporaryMarketRent The market rent we have recorded, for that unit, at the time the offer was made

ContemporaryInPlaceRent The recorded in place rent we recorded, for that tenant, at the time the offer was made