

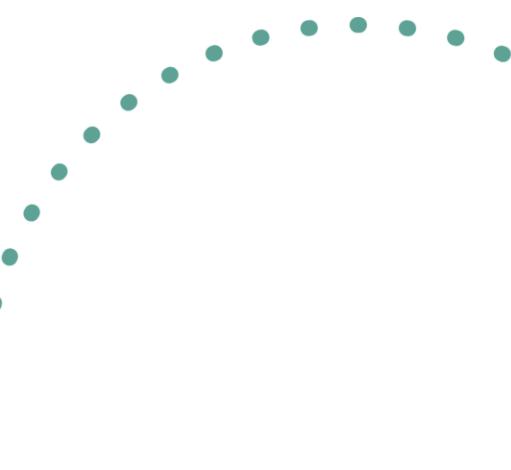
FINAL PROJECT - stage 2

AirBnB Prices in European Cities

Team Fin-Pro 8 Insight Seekers

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Data Cleansing

01.

Missing Value

Tidak ada missing value pada seluruh kolom di dataset, sehingga tidak perlu dilakukan pengolahan terhadap missing value

02.

Duplicate Data

Tidak ada duplicate value, sehingga tidak perlu dilakukan pengolahan terhadap duplicate value

03.

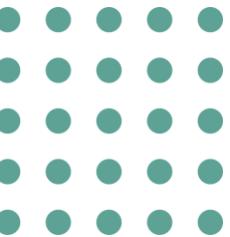
Handle Outliers

Pada dataset terdapat outliers di beberapa feature, perlu dilakukan handle outliers dengan menggunakan metode winsorization dengan limit 2% pada feature price dan limit 1% pada feature person_capacity, cleanliness_rating, guest_satisfaction_overall, dist, metro_dist, attr_index, attr_index_norm, rest_index, dan rest_inde_norm.

04.

Class Imbalance

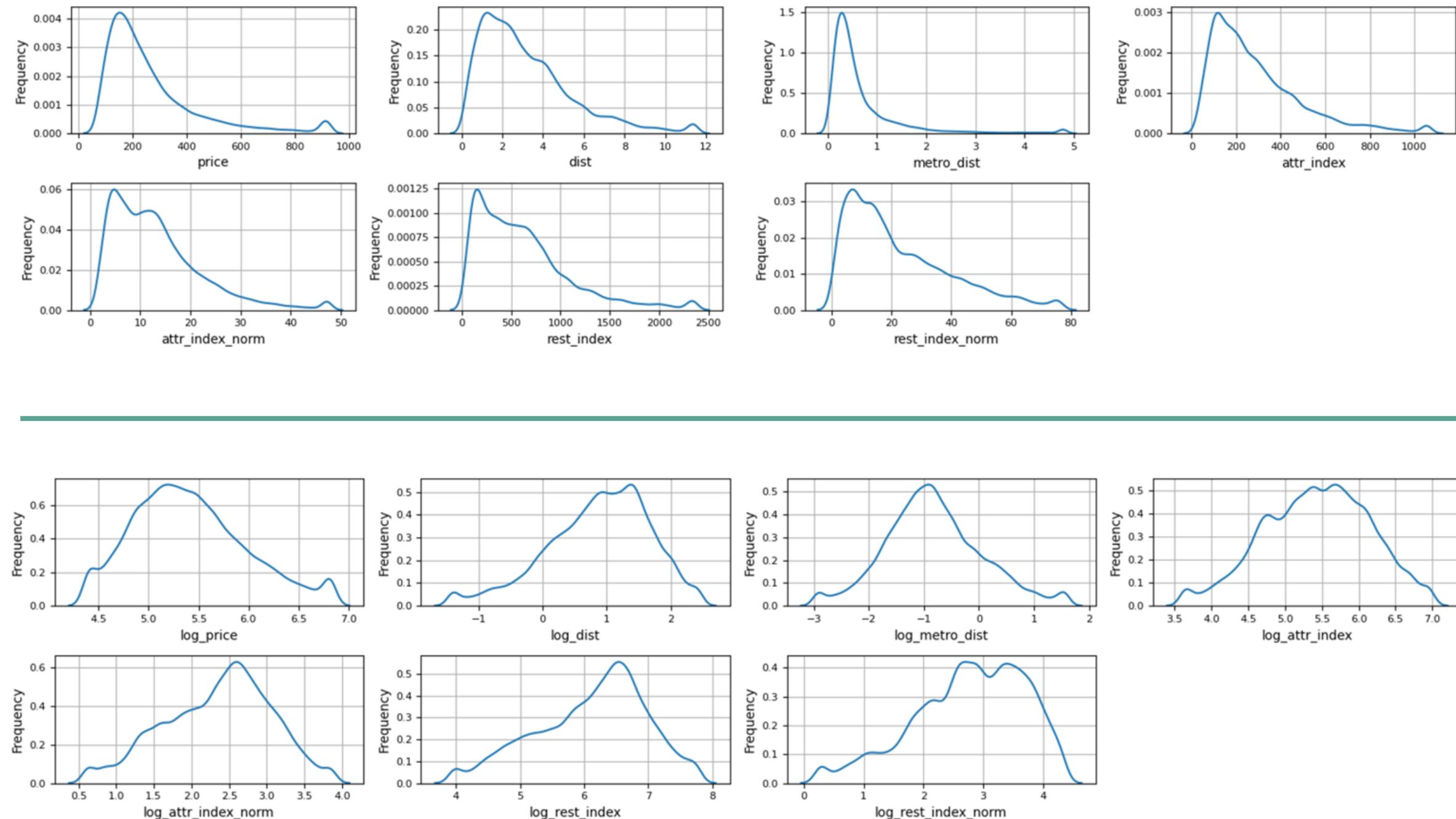
Class Imbalance terdapat pada feature sehingga tidak perlu dilakukan penanganan. Handle Class Imbalance dilakukan pada target dan biasanya dilakukan pada model klasifikasi



04. Feature Transformation

Feature Transformation dilakukan dengan menggunakan **Log Transformation** pada kolom yang memiliki distribusi right skewed yaitu price, dist, metro_dist, attr_index, attr_index_norm, rest_index, dan rest_index_norm.

Standardization dilakukan pada kolom person_capacity, cleanliness_rating, dan guest_satisfaction_overall





05. Feature Encoding

Label Encoding :

Feature dibawah ini dilakukan encoding dengan
Value True = 1 dan False = 0

- room_shared
- room_private
- host_is_superhost
- week_time (weekends = 1 dan weekdays = 0)

One Hot Encoding :

- city
- room_type



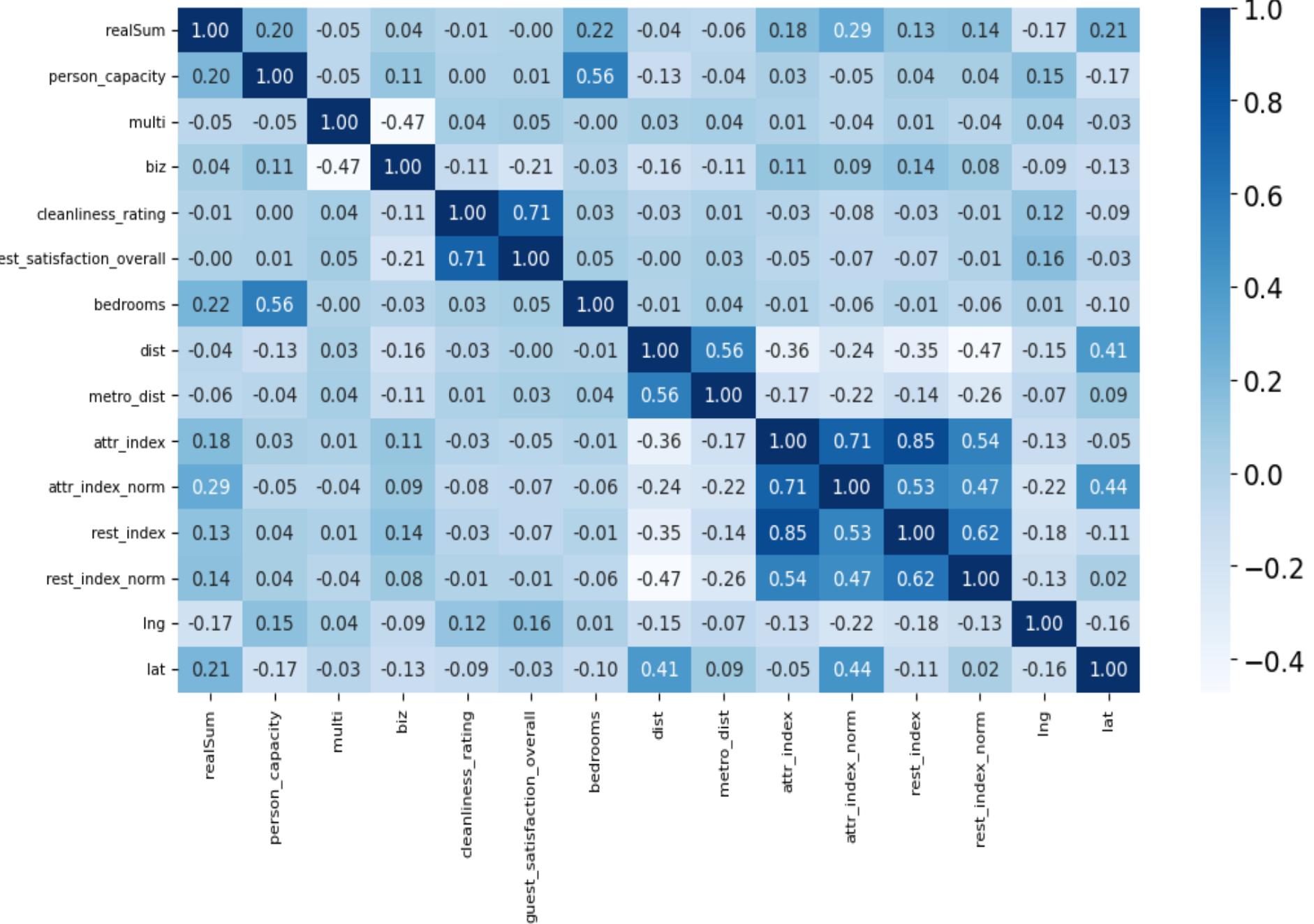
Feature Engineering

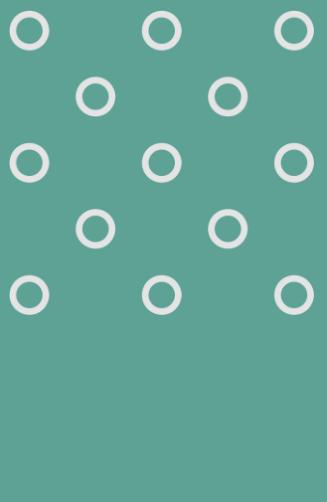
Feature selection

Fitur yang dibuang yakni attr_index_norm, rest_index_norm, log_attr_index_norm, log_rest_index_norm karena memiliki korelasi sangat tinggi (dengan threshold di atas 0.9) dan berpotensi sebagai redundant. Kami juga akan membuang fitur week_time karena tidak langsung memberikan dampak pada model prediksi harga.

Feature extraction

Fitur yang ditambahkan dari kolom yang tersedia:
price_per_person, accessibility, satisfaction_level





4 Feature Tambahan

1. walkability_score

Properti yang mudah diakses dengan berjalan kaki. Data dapat diperoleh dari API Walk Score atau OpenStreetMap.

1. average_weather

Daya tarik destinasi berdasarkan musim. Data dapat diperoleh dari API cuaca

3. nearby_hotel_count

Tingkat persaingan di area tersebut yang dapat mempengaruhi harga

4. event_factor

Dampak acara besar terhadap permintaan dan harga. Data dapat diperoleh di kalender acara kota atau situs.



INSIGHT
SEEKERS

GITHUB Repository

Sign in

rdarmawan48/FinPro8-InsightSeekers: Kelompok 8 Data Science InsightSeekers

https://github.com/rdarmawan48/FinPro8-InsightSeekers/tree/main

rdarmawan48 / FinPro8-InsightSeekers

Type / to search

Code Issues Pull requests Actions Projects Wiki Security Insights Settings

FinPro8-InsightSeekers Public

Pin Unwatch 1 Fork 0 Star 0

main 1 Branch 0 Tags Go to file Add file Code

rdarmawan48 rework subdirectory 28846e9 · 1 minute ago 13 Commits

data rework subdirectory 1 minute ago

deployment rework subdirectory 1 minute ago

notebooks rework subdirectory 1 minute ago

src rework subdirectory 1 minute ago

.gitignore Initial commit 3 weeks ago

LICENSE.txt rework subdirectory 1 minute ago

README.md Add Read.Me stage 2 yesterday

requirements.txt Revised and Add FinPro8 homework stage1 file 3 weeks ago

README License

About

Kelompok 8 Data Science InsightSeekers

Readme View license Activity 0 stars 1 watching 0 forks

Releases

No releases published Create a new release

Packages

No packages published Publish your first package

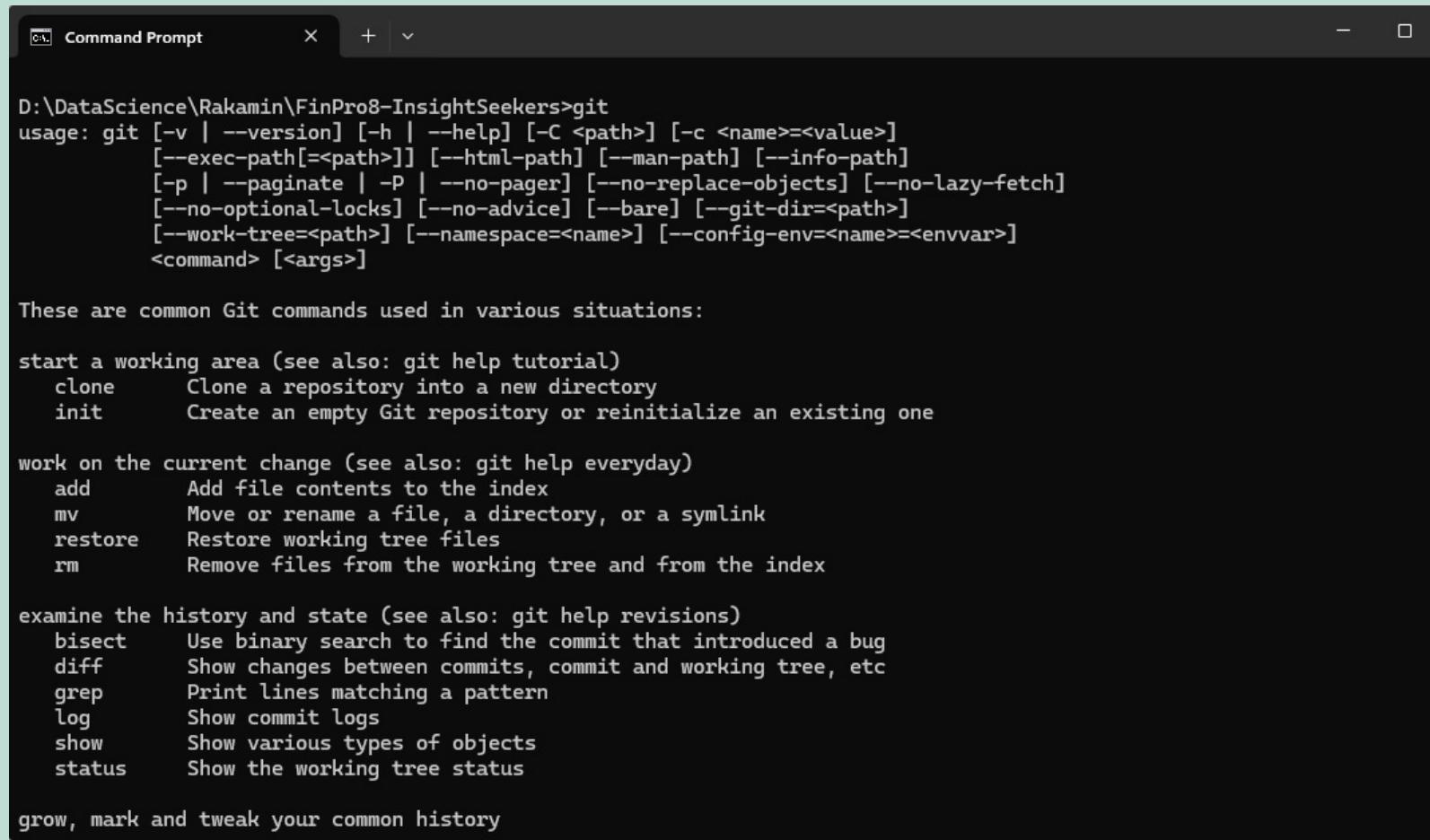
This screenshot shows a GitHub repository page for 'FinPro8-InsightSeekers' owned by 'rdarmawan48'. The repository is public and contains 13 commits from 'rdarmawan48' across four branches: 'data', 'deployment', 'notebooks', and 'src'. The commits are dated from 'yesterday' to '3 weeks ago'. The repository has 0 stars, 1 watching, and 0 forks. It includes sections for 'About', 'Releases', and 'Packages', both of which are currently empty.

Link GitHub : [rdarmawan48/FinPro8-InsightSeekers: Kelompok 8 Data Science InsightSeekers](https://github.com/rdarmawan48/FinPro8-InsightSeekers)

Tahapan koneksi ke

Github

- Install Git di komputer local
check aplikasi dengan mengetikan >git



```
D:\DataScience\Rakamin\FinPro8-InsightSeekers>git
usage: git [-v | --version] [-h | --help] [-C <path>] [-c <name>=<value>]
           [--exec-path[=<path>]] [--html-path] [--man-path] [--info-path]
           [-p | --paginate | -P | --no-pager] [--no-replace-objects] [--no-lazy-fetch]
           [--no-optional-locks] [--no-advice] [--bare] [--git-dir=<path>]
           [--work-tree=<path>] [--namespace=<name>] [--config-env=<name>=<envvar>]
           <command> [<args>]

These are common Git commands used in various situations:

start a working area (see also: git help tutorial)
  clone      Clone a repository into a new directory
  init       Create an empty Git repository or reinitialize an existing one

work on the current change (see also: git help everyday)
  add        Add file contents to the index
  mv         Move or rename a file, a directory, or a symlink
  restore    Restore working tree files
  rm         Remove files from the working tree and from the index

examine the history and state (see also: git help revisions)
  bisect    Use binary search to find the commit that introduced a bug
  diff      Show changes between commits, commit and working tree, etc
  grep      Print lines matching a pattern
  log       Show commit logs
  show      Show various types of objects
  status    Show the working tree status

grow, mark and tweak your common history
```

kalau git sudah terinstall dengan benar akan muncul message seperti di atas

- Koneksi kan local repository ke Github

Ketikan command berikut di cmd

```
>git clone https://github.com/rdarmawan48/FinPro8-InsightSeekers.git
```

- Menambahkan file dari local ke Github

Setelah menambahkan file atau membuat file, upload file tersebut ke GitHub

```
>git add .
```



INSIGHT SEEKERS

- Menambahkan file dari local ke Github

>git commit -m "add notebook jupyter"

berikan description atas file yang hendak di add
lalu

>git push origin

melakukan commit dan push ke GitHub

Berikutnya adalah untuk check ke laman GitHub untuk file yang baru di upload

The screenshot shows a GitHub repository page for 'FinPro8-InsightSeekers/notebooks' at the 'main' branch. The URL in the address bar is <https://github.com/rdarmawan48/FinPro8-InsightSeekers/tree/main/notebooks>. The repository name is 'rdarmawan48 / FinPro8-InsightSeekers'. The main navigation bar includes links for Code, Issues, Pull requests, Actions, Projects, Wiki, Security, Insights, and Settings. The 'Code' tab is selected. On the left, there's a sidebar with a 'Files' section showing a tree view of the repository structure: 'main' (selected), 'data', 'deployment', 'notebooks' (expanded, showing 'Homework_FinPro-8_InsightSee...', 'Homework_FinPro_8_InsightSee...', 'presentasi', and 'src'), and 'src'. The main content area displays a list of files in the 'notebooks' directory. A recent commit by 'rdarmawan48' titled 'rework subdirectory' is shown, made 7 minutes ago. Below it is a table listing the files in the 'notebooks' directory:

Name	Last commit message	Last commit date
...		
Homework_FinPro-8_InsightSeekers.Stage-1.ipynb	rework subdirectory	7 minutes ago
Homework_FinPro_8_InsightSeekers.Stage_2.ipynb	rework subdirectory	7 minutes ago

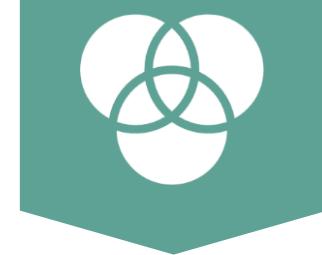


Business Insight



Prices Distribution

Harga sebagian besar properti berfokus pada nilai rendah, dengan beberapa outlier. Solusi yang bisa ditawarkan yakni fokus pada segmen harga ini untuk menarik lebih banyak pelanggan.



Guest Satisfaction

Sebagian besar tamu memberikan rating tinggi (80–100). Pemilik Airbnb atau host bisa berfokus pada ulasan positif ini guna meningkatkan kepercayaan pelanggan baru.



Accesibility

Lokasi dengan skor tinggi pada indeks atraksi/restoran menjadi daya tarik tersendiri bagi turis. Airbnb bisa menggunakan metode promosi ini kepada para turis yang sedang berburu pengalaman lokal.



Group Capasity

Properti dengan kapasitas untuk 2–4 orang lebih dominan dipilih oleh turis. Hal ini mengindikasikan bahwa target pasar utama adalah pasangan atau keluarga kecil. Host bisa berfokus pada kebutuhan tipe turis ini.



Terima Kasih

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