

The background of the slide is a light gray gradient with several realistic water droplets of various sizes scattered across it. The droplets have highlights and shadows, giving them a three-dimensional appearance.

INSIGHTS FROM AIRBNB, NYC PRE COVID PERIOD

FOR DATA ANALYSIS MANAGERS & LEAD DATA ANALYST

AGENDA

- OBJECTIVE
- BACKGROUND
- DATA UNDERSTANDING, PREPARATION, AND PRE-PROCESSING
- EXPLORATORY DATA ANALYSIS
- KEY FINDINGS
- APPENDIX:
 - DATA SOURCE
 - DATA METHODOLOGY

OBJECTIVE

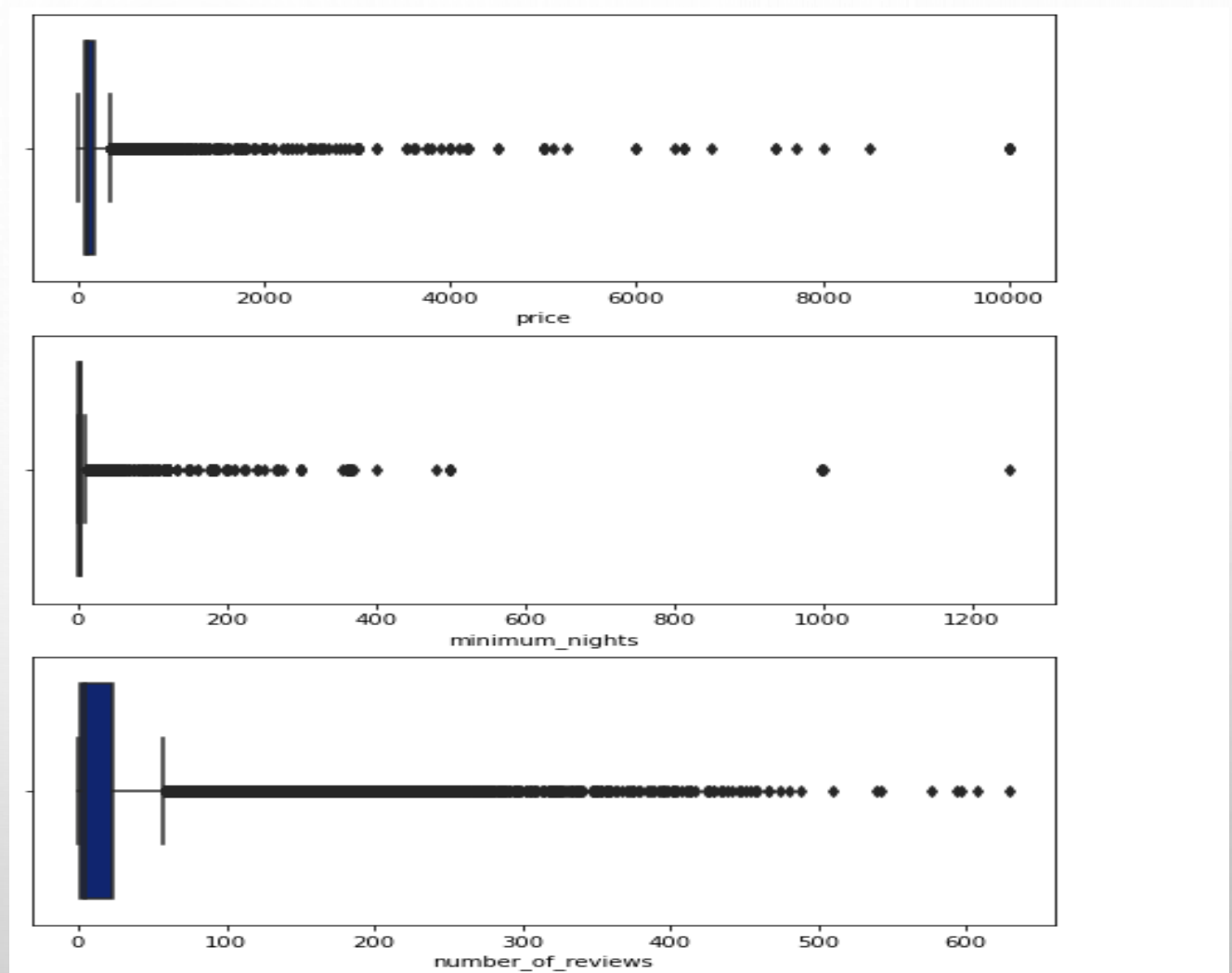
- IMPROVE OUR SHARED UNDERSTANDING ABOUT THE MARKET CONDITION OF AIRBNB COMMUNITY PRE COVID PERIOD
- IMPROVE OUR SHARED UNDERSTANDING ABOUT THE CHALLENGES AND GAP WE FACED DURING OUR RESEARCH PHASE AND DATA PREPARATION
- PROVIDE EARLY RECOMMENDATIONS TO DATA ANALYSIS MANAGERS & LEAD DATA ANALYST

BACKGROUND

- FOR THE PAST FEW MONTHS, AIRBNB HAS SEEN A MAJOR DECLINE IN REVENUE
- DUE TO COVID RESTRICTIONS TRAVEL WAS LIMITED
- RESTRICTIONS HAVE STARTED LIFTING AND PEOPLE HAVE STARTED TO TRAVEL MORE AND THUS A THOROUGH ANALYSIS WAS NEEDED TO BE READY TO MITIGATE REVENUE LOSS

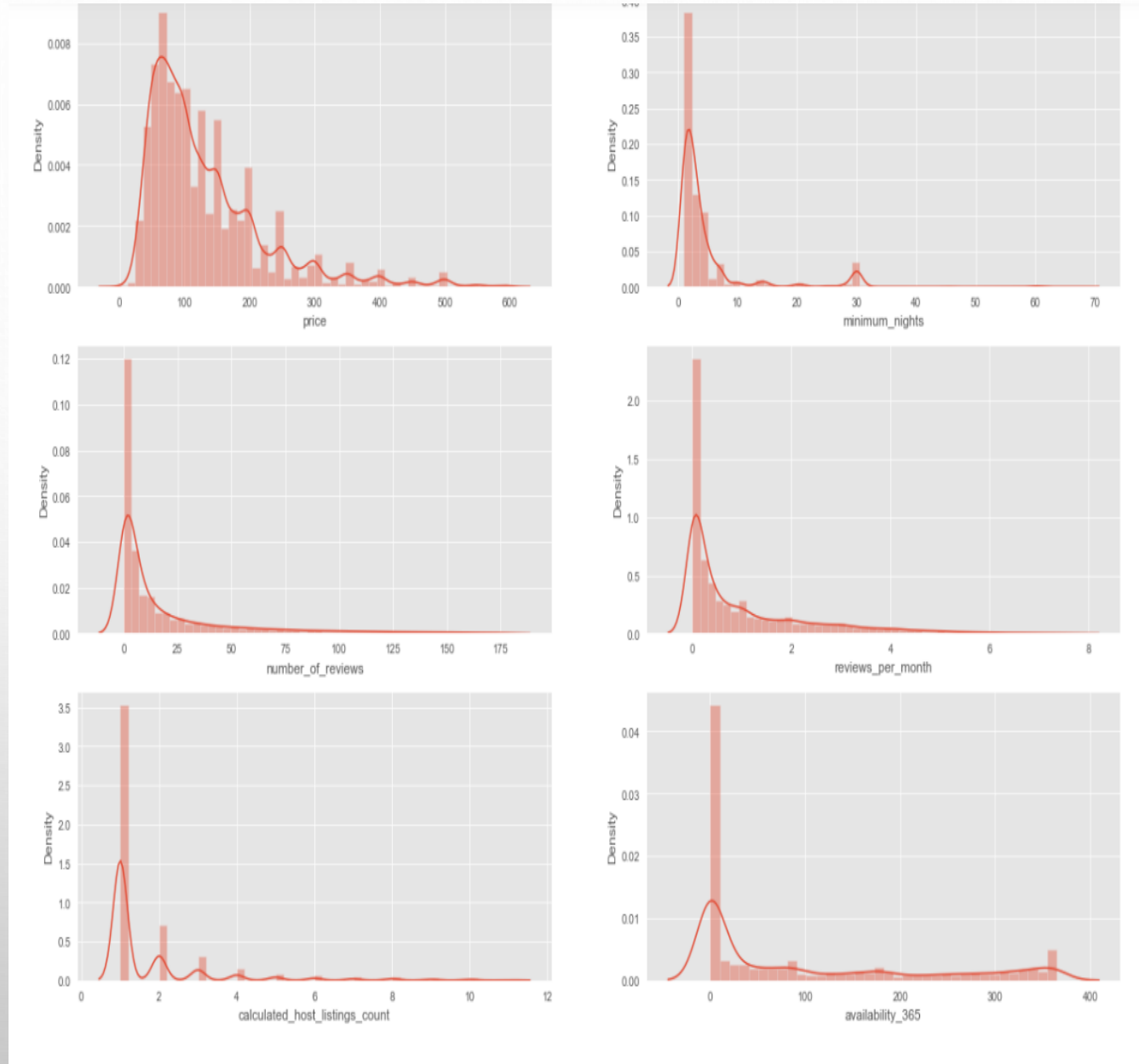
DATA UNDERSTANDING, PREPARATION, AND PRE- PROCESSING

- FIRST WE IMPORTED LIBRARIES, READ THE DATA AND CHECKED SHAPE AND SIZE OF THE DATASET AND CHECKED FOR NULL VALUES AND OUTLIERS
- FURTHER, WE HANDLED NULL VALUES OF 2 COLUMNS BY IMPUTING WITH MODE AS NULL VALUES WAS JUST 0.03% AND THEN FOR DATE COLUMN WE CREATED A NEW CATEGORY " NOT REVIEWED" AND FOR OTHER COLUMN WE IMPUTED THE VALUES WITH "ZERO"
- FURTHERMORE WE DEALT WITH OUTLIERS BY CAPPING IT



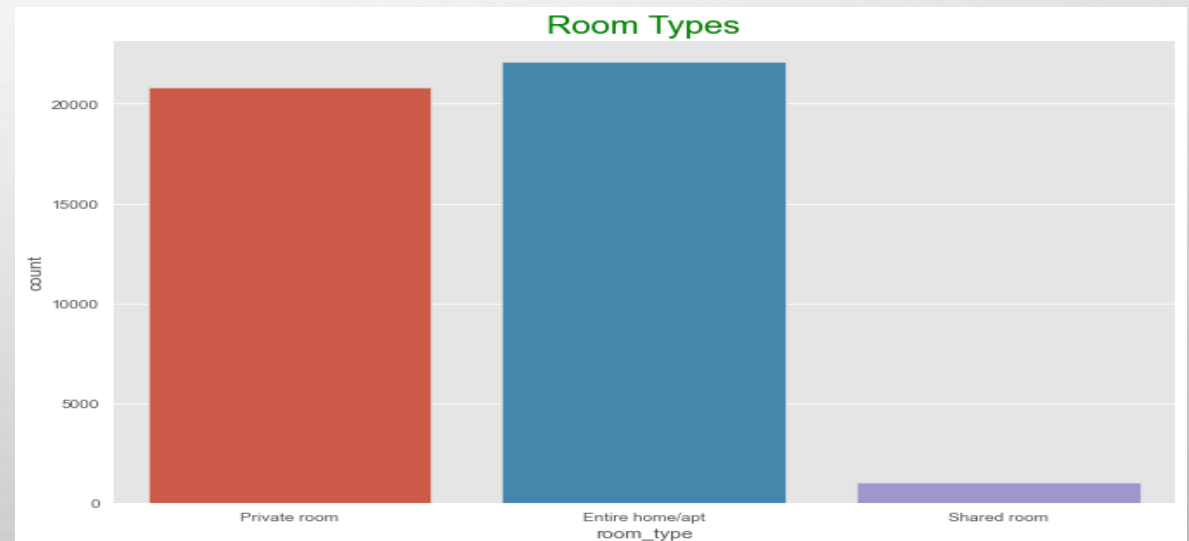
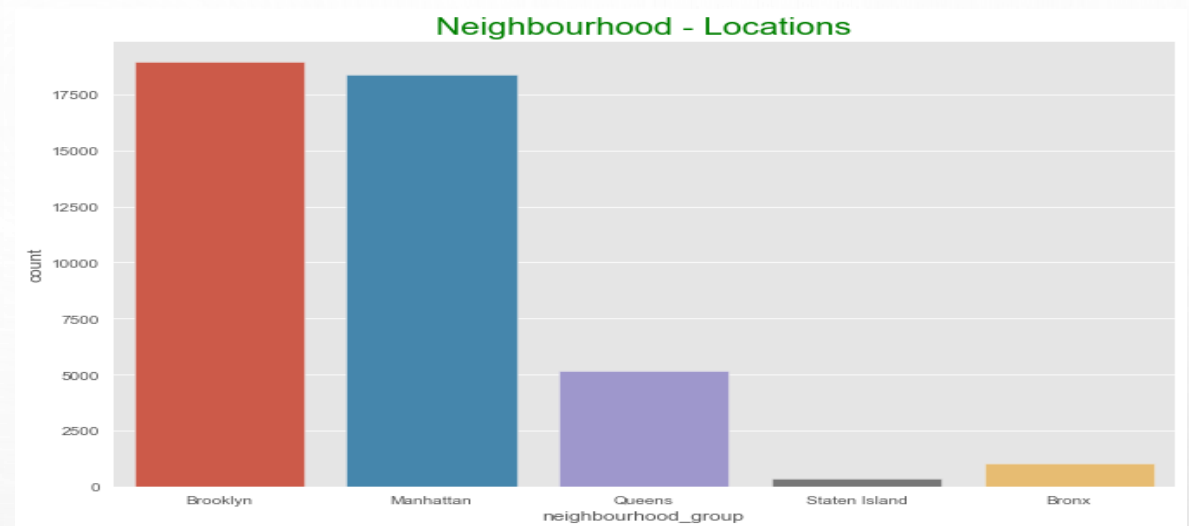
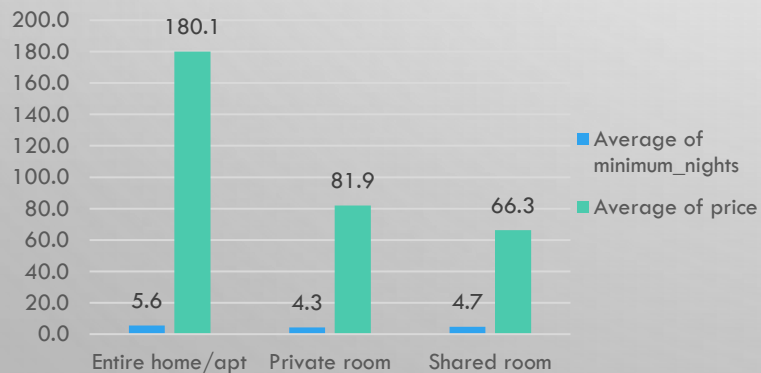
EXPLORATORY DATA ANALYSIS

- WE USED DISTRIBUTION PLOT FROM SEABORN FOR NUMERICAL COLUMN
- WE USED COUNT PLOT FROM SEABORN FOR CATEGORICAL COLUMN
- FOR BIVARIATE AND MULTIVARIATE ANALYSIS WE USED PIVOT TABLE FROM EXCEL AND TABLEAU VISUALISATION



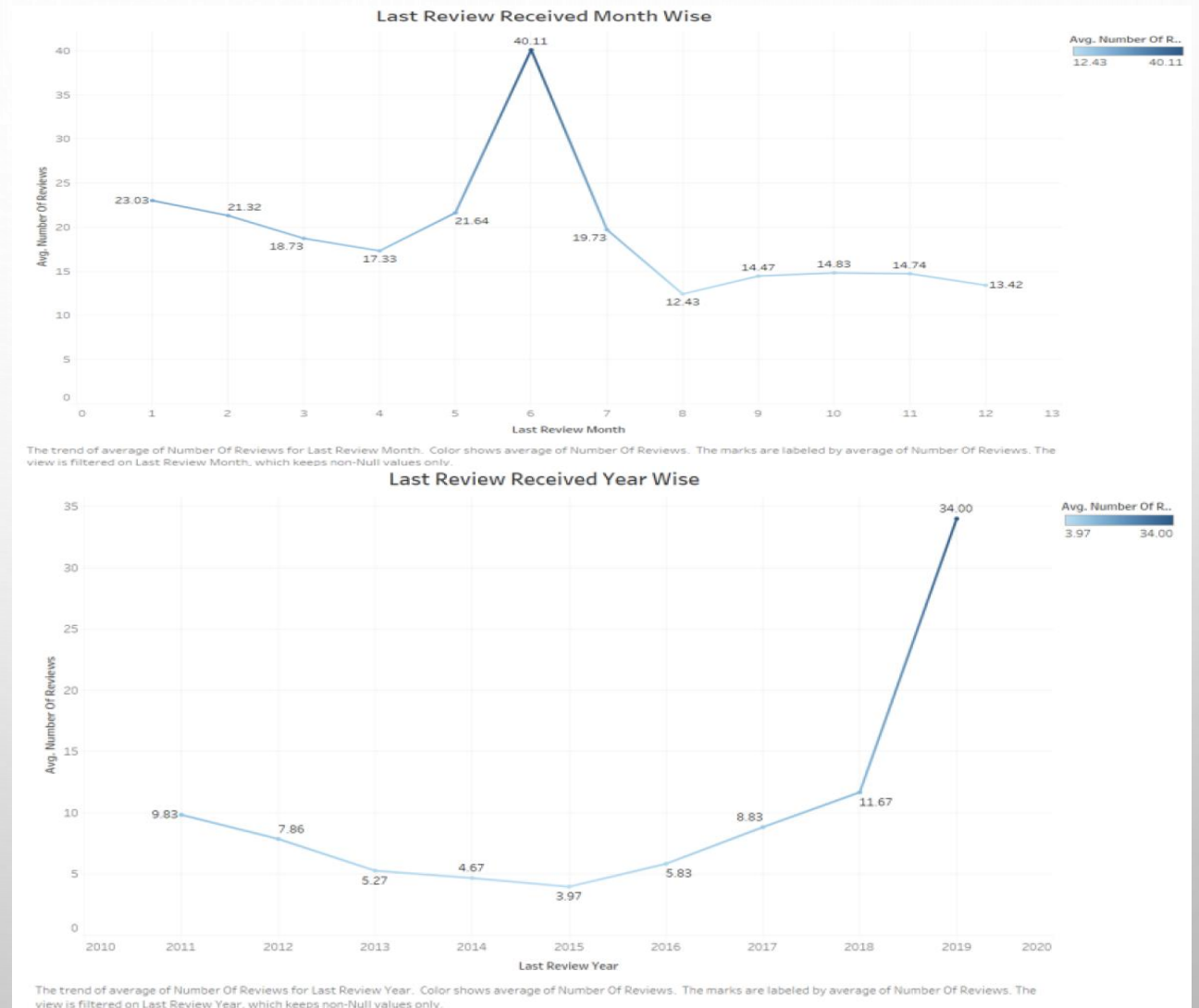
ROOM TYPE AND NEIGHBOURHOOD DISTRIBUTION

- BROOKLYN, MANHATTAN AND QUEENS ARE DOMINATING WHEN IT COMES TO LISTED HOSTING
- MAJORLY PRIVATE ROOMS OR ENTIRE APARTMENT ARE PROVIDED BY HOST
- ON AN AVERAGE ENTIRE HOME/APT TYPES ARE PREFERRED MORE BY THE CUSTOMERS FOLLOWED BY PRIVATE ROOMS AND THEN THE SHARED ROOMS. MOSTLY BECAUSE THEY ARE ALSO AVAILABLE FOR A HIGHER NUMBER OF MINIMUM NIGHTS STAY WINDOW BOOKING AS COMPARED TO PRIVATE AND SHARED ROOMS



REVIEW TREND OVER YEAR AND MONTH

- SLOWLY AND GRADUALLY REVIEWS STARTED TO BUILD UP AND WAS MOSTLY IN 2018 AND 2019
- 6TH MONTH OF THE YEAR I.E JUNE SEEMS TO RECEIVE MOST OF THE LAST REVIEWS IN ALL YEARS FOLLOWED BY 5TH MONTH



APPENDIX – DATA SOURCE

- WE CAN ASSUME THAT THE COMPANY USED THE INTERNAL TOOL SUCH AS CRM TO CAPTURE THE DATA
- HERE IS A SNAPSHOT OF OUR DATA DICTIONARY

Column	Description
id	listing ID
name	name of the listing
host_id	host ID
host_name	name of the host
neighbourhood_group	location
neighbourhood	area
latitude	latitude coordinates
longitude	longitude coordinates
room_type	listing space type
price	
minimum_nights	amount of nights minimum
number_of_reviews	number of reviews
last_review	latest review
reviews_per_month	number of reviews per month
calculated_host_listings_count	amount of listing per host
availability_365	number of days when listing is available for booking

APPENDIX – DATA METHODOLOGY

- DATA UNDERSTANDING, PREPARATION, AND PRE-PROCESSING :
 - READING DATA
 - ASSIGNING CORRECT DATATYPES
 - TREATING MISSING VALUES
 - TREATING OUTLIER
- VARIABLE TRANSFORMATION :
 - VARIABLE TRANSFORMATION AND APPLYING CATEGORICAL VARIABLE TRANSFORMATIONS TO TURN INTO NUMERICAL DATA AND NUMERICAL VARIABLE TRANSFORMATIONS TO SCALE DATA
- EXPLORATORY DATA ANALYSIS :
 - UNIVARIATE ANALYSIS(NUMERICAL AND CATEGORICAL) IN PYTHON
 - BIVARIATE AND MULTIVARIATE ANALYSIS IN EXCEL AND TABLEAU

The background is a light gray gradient. It is decorated with several realistic water droplets of various sizes, some at the top and some at the bottom. In the upper center, there is a faint, circular logo or watermark that appears to be a university crest.

TEAM CONTRIBUTION

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