DashDelicious

GlobalBite: A Data-Driven Analysis for Restaurant Expansion in Major Cities Worldwide

Business Intelligence: Applications & Projects

Group 1

Jinyoung Jeon - Mohammad Azizul Kawser

Nandor Hajdu - Phung Tran - Trang Nguyen

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Introduction

About **DashDelicious**

DashDelicious (DD) is a fast-food chain has become a household name in the US:

- Established in 2015
- 2000+ stores in the US
- 3500-4000 active employees

DD's strategic focus is on expanding its market share both within the US and internationally.

Factors of **success**

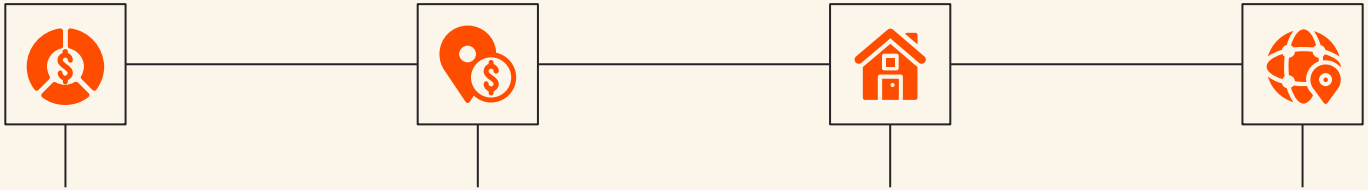
Adapting to Local Tastes & Cultures

Reasonably Competitive Pricing Strategy

Data-Driven Decision-Making

Strong Financial Performance

About **GlobalBite**



Comparing the cost of living in various region

Exploring customers' purchasing power in different cities

Investigating the cost of space

Developing a scoring model for cities

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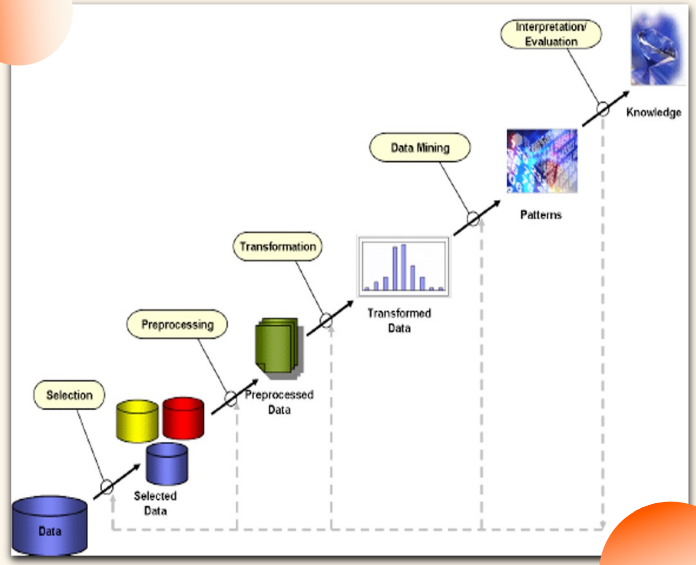
Project **Approach & Methodology**

Methodology

KDD - Knowledge Discovery in Database

- **Data Selection:** Cost of Living Data with Indexes combined with population and geolocation data of cities to create a comprehensive merged dataset.
- **Data Cleansing:** Eliminating errors, resolving inconsistencies, and converting the data into a standardized format
- **Data Transformation:** Changing the format, structure, semantics, or context of the data, as well as removing duplicates and reordering the data
- **Data Mining:** No ML or AI applied but performed normalization (min-max), statistical analysis such as correlation
- **Knowledge:** Data visualization techniques are used to present complex data and generate insights



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Analysis & **Findings**

Data **Analysis**

Description of Data

- Three datasets (Global Cost of Living, Cost of Living Index by Cities and Geonames - All Cities with a population > 1000) were consolidated into one dataset, encompassing 536 cities from 115 different countries.

- Calculated fields were developed to analyze affordability, consumer behavior, purchasing power, and market size.

Calculated Fields

- **Affordability of Fast-Food Meals (Net Income/McMeals prices)"**

- **"Tendency to eat out Index (GI/RPI)"**

- Developed to analyze different factors related to *affordability*, and *consumer behavior.*

Scoring Model and Interpretations

Affordability of Fast-food Meals

- Lower affordability rates may indicate that consumers are more price-sensitive to dining out.

Tendency to Eat Out

- Higher tendency to eat out might imply a larger potential market for restaurant business.
- Other factors for consideration: Cultural norms, dining out experience.

Local Purchasing Power

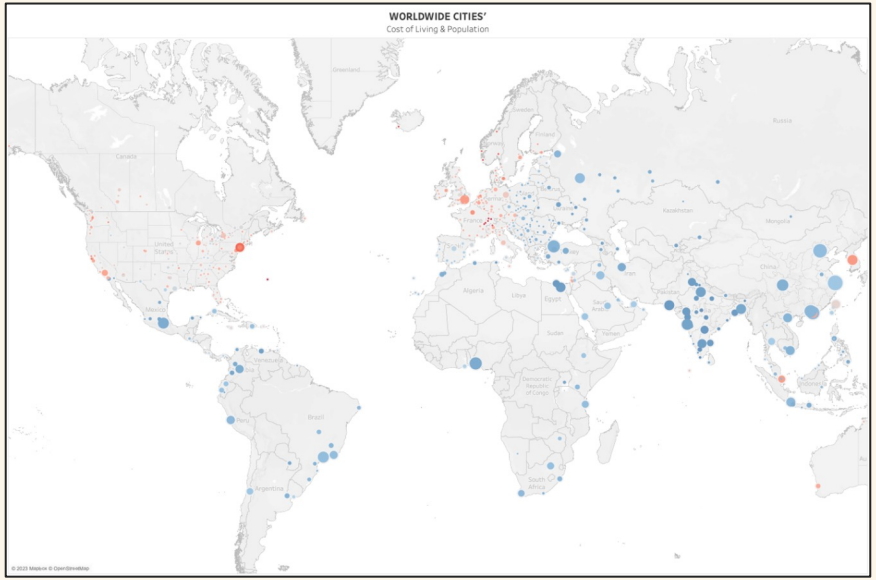
- Higher LPP may show consumers have more disposable income to spend on dining out.
- Other aspects to consider: cost of living, availability of restaurants.

Population

- Larger populations may indicate a larger potential customer base.
- Other factors to consider: level of competition, consumer preferences, as these can impact the viability of expanding in a particular market.

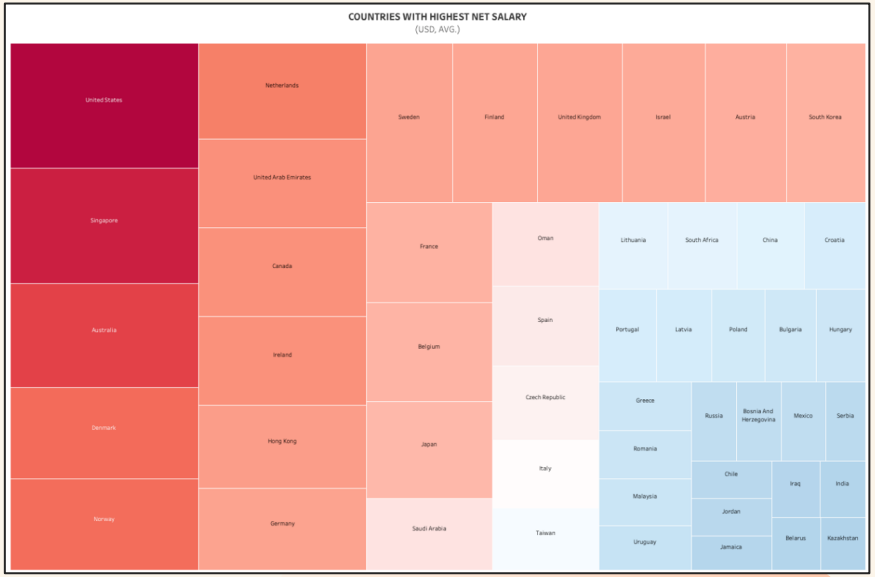
Visual **Analysis** (1)

Map Plot



Population and Cost of Living

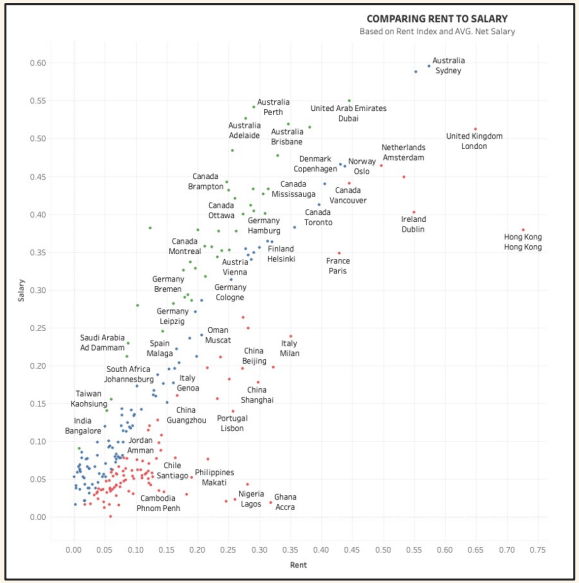
Tree Map



Average Monthly Net Salaries

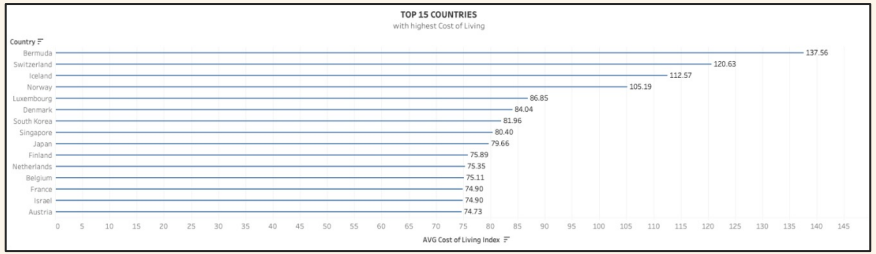
Visual **Analysis** (2)

Scatter Plot



Average Monthly Net Salary and Rent Ratio

Bar Chart



Cost of Living

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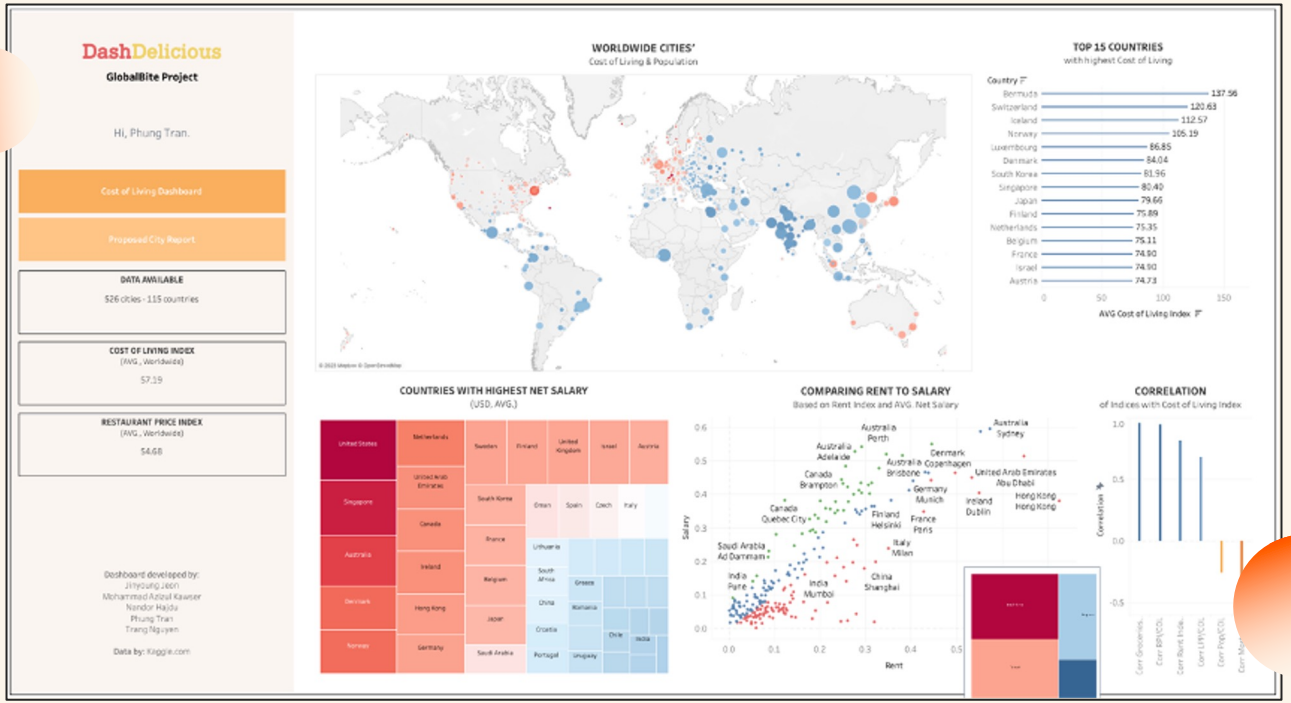
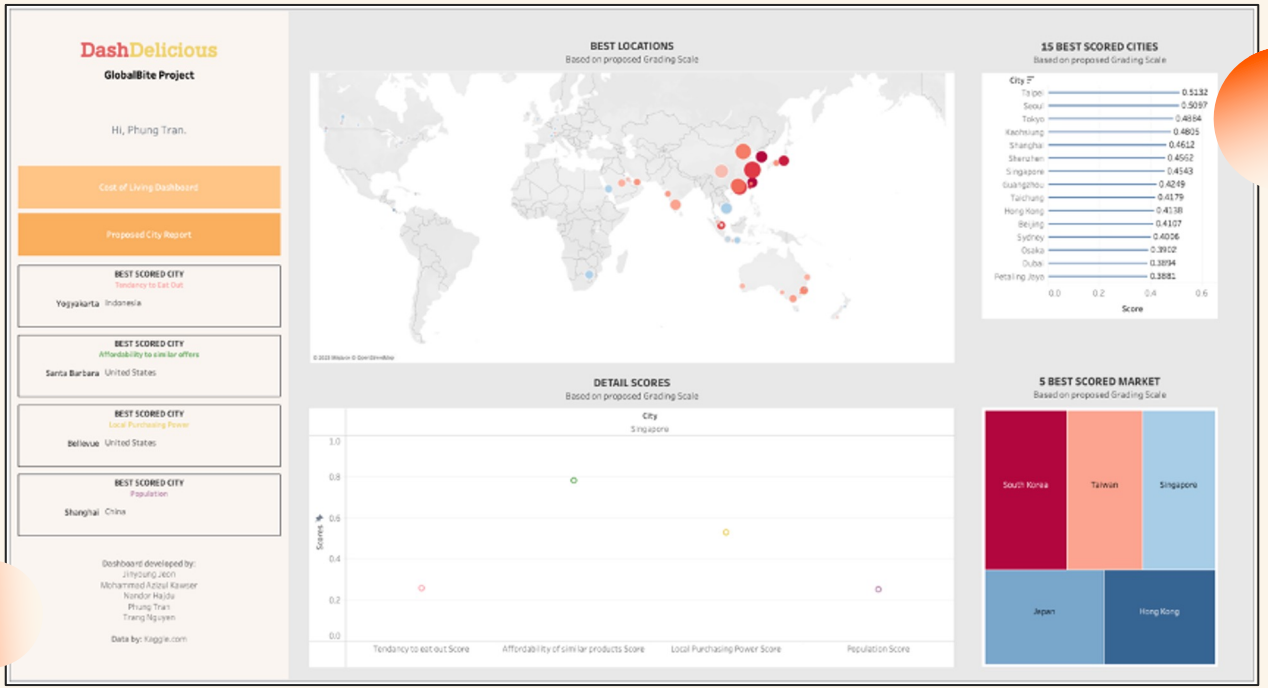
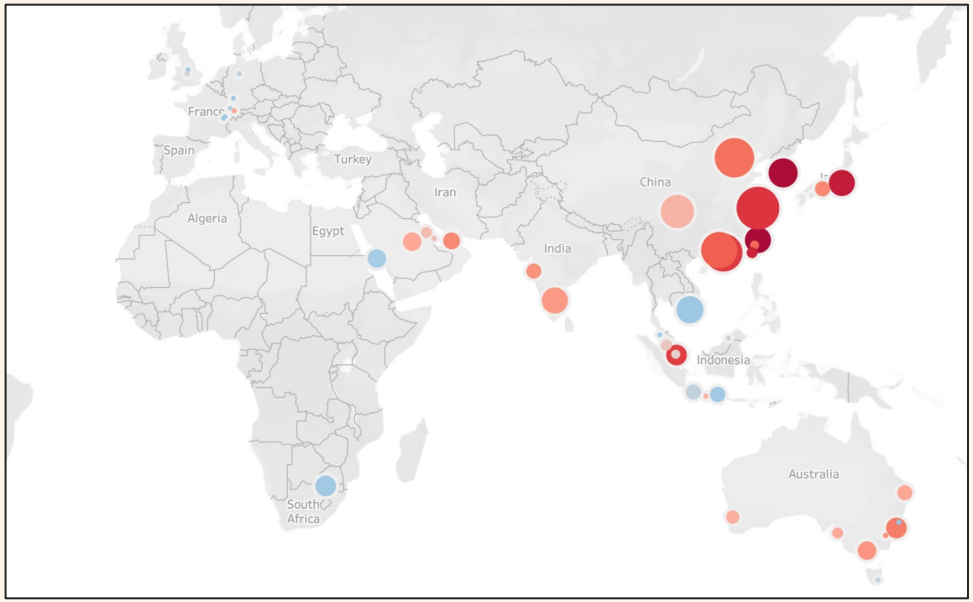
Dashboards **Demonstration**


DashDelicious
GlobalBite Project
Hi, Phung Tran.
Cost of Living Dashboard
Proposed City Report
DATA AVAILABLE
526 cities - 115 countries
COST OF LIVING INDEX
(AVG., Worldwide)
57.19
RESTAURANT PRICE INDEX
(AVG., Worldwide)
54.68
Dashboard developed by:
Jinyoung Jeon
Mohammad Azizul Kawser
Nandor Hajdu
Phung Tran
Trang Nguyen
Data by: Kaggle.com
WORLDWIDE CITIES'
Cost of Living & Population
TOP 15 COUNTRIES
with highest Cost of Living
Country
Bermuda 137.56
Switzerland 120.63
Iceland 112.57
Norway 105.19
Luxembourg 86.85
Denmark 84.04
South Korea 81.96
Singapore 80.40
Japan 79.66
Finland 75.89
Netherlands 75.35
Belgium 75.11
France 74.90
Israel 74.90
Austria 74.73
0
50
100
150
AVG Cost of Living Index
COUNTRIES WITH HIGHEST NET SALARY
(USD, AVG.)
United States
Netherlands
Sweden
Finland
United Kingdom
Israel
Austria
Singapore
United Arab Emirates
South Korea
Spain
Czech
Italy
Canada
France
Australia
Ireland
Belgium
Lithuania
Denmark
Hong Kong
Japan
South Africa
Greece
China
Norway
Germany
Saudi Arabia
Croatia
Romania
Chile
Portugal
Uruguay
India
COMPARING RENT TO SALARY
Based on Rent Index and AVG. Net Salary
Salary
Rent
0.0
0.1
0.2
0.3
0.4
0.5
0.6
Australia Perth
Australia Sydney
Australia Adelaide
Denmark Copenhagen
Australia Brisbane
United Arab Emirates Abu Dhabi
Canada Brampton
Germany Munich
Ireland Dublin
Hong Kong
Canada Quebec City
Finland Helsinki
France Paris
Italy Milan
Saudi Arabia Ad Dammam
India Pune
India Mumbai
China Shanghai
CORRELATION
of Indices with Cost of Living Index
Correlation
1.0
0.5
0.0
-0.5
Corr Groceries
Corr RP(COL)
Corr Rent Ind.
Corr LP(COL)
Corr Pow(COL)


DashDelicious
GlobalBite Project
Hi, Phung Tran.
Cost of Living Dashboard
Proposed City Report
BEST SCORED CITY
Tendancy to Eat Out
Yogyakarta Indonesia
BEST SCORED CITY
Affordability to similar offers
Santa Barbara United States
BEST SCORED CITY
Local Purchasing Power
Bellevue United States
BEST SCORED CITY
Population
Shanghai China
Dashboard developed by:
Jihyoung Jeon
Mohammed Azizul Kawser
Nandor Hajdu
Phung Tran
Trang Nguyen
Data by: Kaggle.com
BEST LOCATIONS
Based on proposed Grading Scale
15 BEST SCORED CITIES
Based on proposed Grading Scale
City
Taipei 0.5132
Seoul 0.5097
Tokyo 0.4884
Kaohsiung 0.4805
Shanghai 0.4612
Shenzhen 0.4562
Singapore 0.4543
Guangzhou 0.4249
Taichung 0.4179
Hong Kong 0.4138
Beijing 0.4107
Sydney 0.4006
Osaka 0.3902
Dubai 0.3894
Petaling Jaya 0.3881
0.0 0.2 0.4 0.6
Score
DETAIL SCORES
Based on proposed Grading Scale
City
Singapore
Scores
1.0 0.8 0.6 0.4 0.2 0.0
Tendancy to eat out Score
Affordability of similar products Score
Local Purchasing Power Score
Population Score
5 BEST SCORED MARKET
Based on proposed Grading Scale
South Korea
Taiwan
Singapore
Japan
Hong Kong

Findings & **Interpretation**



Asia-Pacific region with South Korea, Taiwan, Singapore, Japan and Hong Kong are most potential locations for future in-depth market research (based on our scoring model).

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Conclusions

Summary

Aim

Comparing the cost of living in various region

Exploring customers' purchasing power in different cities

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Developing a scoring model for cities

Process

Data Analysis

- 3 data sets
- Calculated fields - analyse factors
- Scoring model

Visual Analysis

- Map Plot
- Tree Map
- Scatter Plot
- Bar chart

Result

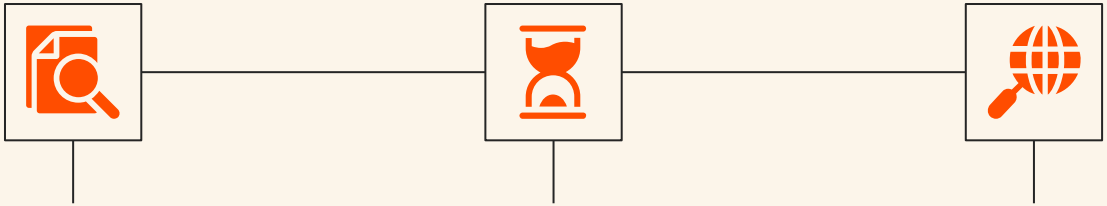
Affordability of Fast-food Meals

Tendency to Eat Out

Local Purchasing Power

Population

Limitations



Secondary data source:
Limitations on accuracy and completeness

Only considers limited factors:
Cultural and social preferences were not considered, which can greatly impact the success of restaurant chains in different regions

Only analyses major cities worldwide:
Analysis findings may not apply to smaller cities or rural areas around the globe

06

Next **Steps**

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Cultural & Regulatory Study

Analyze the impact of cultural differences and different regulatory environments on the restaurant industry

Customer Personas Development

Incorporate and explore emerging technologies (AI, ML) to analyze and predict consumer behaviors & preferences

Market Environment Analysis

Identify gaps in potential markets, assess market competitors and collect feedback from existing and potential customers

Go-to-market Strategy Design

Define opportunities and challenges for restaurant expansions regarding go-to-market initiatives, personalized offerings development and marketing & business development

THANKS!

Feedbacks **are welcome!**