One Service App - Prototyping the Business Model, Analysis and Financial Segments

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28/09/2024

Abstract

Small and medium-sized enterprises (SMEs) need to maintain position against the competition represented by bigger companies or their advocates/sponsors… in fact, I think that's a given. In the present scenario mobile technology and machine learning has resided as an aiding hand for such SMEs. This article is about an app that can utilize the machine learning algorithm to find professionals in various industries for your business near end-users. The machine learning will help the customers to find out any nearby small/medium-sized business owners who may offer some other product/services.

SMEs are constantly competing with giants and their advocates/sponsors in the rapidly changing digital marketplace to survive. Nowadays the mobile technology and machine learning has been introduced to these SME. Further, this report talks about an application which could incorporate a machine learning algorithm to detect people/businesses of different professions, who having their business near end-users. The platform will use the power of 5G and provide customers to find small/medium business owners based on the number of different types clothes they need from the store front which is closest to their physical location with the help of machine learning.

1. Overview of the One Service App

1.1 Concept

This report will give a general preview of our prototype business model and app to help people trade locally. A comprehensive app that aggregates services and products from local vendors. We adopt a machine learning technique to create an hybrid recommendation framework that mixes the state-of-the-art of collective filtering with content-based filtering and knowledge-based system. The use case demonstration of the One Service model consists of multi-class classification where it is able to classify users into premium, economy and standard segments. It lets us predict what individual users might be interested in. We have also developed geolocation search that will suggest services and products from partners in your region :) It largely entrenches an easy method for customers and local businesses to communicate directly.

1.2 Market / Customer / Business Need Assessment

The One Service app is mainly aimed at the local population in search of low-cost and easy-to-access products and services. While majority of people would like to support their local shops, it is rarely possible as they are lost within bigger organizations. Our app seeks to solve this problem by connecting local sellers to the users through the app making their development growth process easy since they will have many options to choose without sacrificing quality or prices.

Moreover, we anticipate attracting a diverse user base, from budget-conscious shoppers seeking the best deals to premium customers who desire high-quality offerings. This segmentation ensures that our platform caters to a broad audience, fulfilling their unique needs and preferences. By understanding the specific desires of each segment, we can personalize recommendations, enhancing the user experience. Additionally, we believe that promoting local businesses resonates with community-oriented consumers who value connection and support. In a world where online shopping often overshadows local options, the One Service app will empower customers to rediscover the richness of local commerce.

1.3 Target Specifications

- **Local Customer**s: The primary target market for the One Service app includes local consumers seeking affordable and convenient options for various products and services. By providing a user-friendly platform that connects customers with local vendors, we make it easier for them to discover high-quality services without sacrificing affordability.

- **Tech-Savvy Users**: Additionally, we recognize that many younger consumers are comfortable with technology and prefer using apps for their shopping needs. Our app's seamless interface and innovative features will attract tech-savvy users who seek efficient ways to shop.

- **Families and Household**s: Families are another key segment, as they often look for convenient shopping solutions that save time and offer cost-effective options. Our app can simplify their shopping experience by providing tailored suggestions for essential products and services, enabling them to efficiently manage their household needs while supporting local vendors.

2. External Search (Information and Data Analysis)

To better understand the challenges local vendors face in competing with larger corporations and to inform our approach for the One Service app, I explored several insightful resources. Here are some of the key sources I consulted:

- Struggles of Unsupported Local Businesses in Communities: This article highlights key issues such as lack of awareness, financial struggles, limited marketing resources, and community involvement. It emphasizes that local businesses often battle against big box retailers and online shopping giants, making it difficult for them to attract customers who prioritize price over local support. The article also discusses the importance of community initiatives to support these businesses.
- How Small Businesses Can Compete: This resource provides practical strategies for local businesses to establish a competitive edge. It emphasizes the importance of building a strong community reputation, delivering excellent customer service, and engaging effectively with customers.
- Community Support for Local Businesses: This article outlines various ways communities can support local businesses, including organizing promotional events, crowdfunding, and creating mentorship program uses the need for community engagement to boost visibility and customer loyalty for local vendors.

Dataset Description:

The dataset I obtained from Kaggle comprises detailed information about services transactions recorded through Urban Company. Each entry in the dataset represents a unique service request made by a customer, featuring attributes such as service type, sub-service name, charges, and the city where the service was provided. For instance, it includes services like plumber installations and electrician jobs, with varying charges listed. This analysis aims to pinpoint the services that local vendors should prioritize to enhance customer attraction and successfully compete against larger service providers. By identifying popular service types and customer preferences within different regions, we can assist these vendors in crafting appealing offers and promotional strategies tailored to their target markets. Ultimately, this approach will help local vendors better meet customer demands and increase their competitiveness in the market.

3. Analysis / Segmentation of Urban Company Data

By analyzing the dataset of a competitor like Urban Company, which includes services, sub-services, and prices offered by them, we can derive valuable insights for improving our business strategy and competitiveness. Here's what we can learn:

3.1 Pricing Trends

- **Identify Price Ranges**: Analyze how Urban Company prices their services and sub-services across different cities. This allows us to see if they have uniform pricing or if prices vary by location, which could indicate strategies based on local demand or cost of living.
- **Competitive Pricing**: Compare the prices of similar services to evaluate whether local vendors can offer a more competitive rate or if there's a gap in pricing we can exploit. It helps to design pricing strategies where local vendors can undercut the competition on certain services or offer superior value.

3.2 Popular Services

- **Identify In-Demand Services**: By examining which services and sub-services are frequently listed and priced, we can identify which types of services (e.g., plumbing, electrical work, or AC repair) are most popular. This allows local vendors to focus on the most sought-after services and optimize their offerings accordingly.
- **Service Gaps**: Find out if there are any services that Urban Company offers less frequently or doesn't cover in certain regions. These gaps can be exploited by local vendors to fill in the missing services and capture market share.

3.3 Service Categories

- **Sub-service Segmentation**: Analyze how Urban Company segments their services into sub-services. For example, under "plumbing," there could be various sub-services like tap replacement, toilet installation, etc. This gives insights into how specific and detailed their offerings are, helping local vendors to break down and market their own services in a similar or even more tailored manner.
- **Niche Services**: Spot niche or high-value services that may not have many competitors. Offering such services can allow local vendors to target premium customers or specialize in high-demand but less competitive areas.

3.4 EDA

Importing uc_data of urban company downloaded from Kaggle:

```
[95] import pandas as pd
     import matplotlib.pyplot as plt
     import plotly.express as px
     import seaborn as sns
```

```
uc_data = pd.read_csv("uc.csv")
uc_data.sample(10)
```

	service	subservice_name	subservice_charge	city_name	country_name	source
4874	electricians	Single pole MCB installation	['₹119']	thiruvananthapuram	India	UrbanCompany
2262	microwave_repair	HV Capacitor	['₹550', '₹299 (Labour)']	vadodara	India	UrbanCompany
4569	ac_service_repair	Compressor 2 ton	['₹9200']	coimbatore	India	UrbanCompany
1894	microwave_repair	PCB Repair	['₹1300', '₹299 (Labour)']	nagpur	India	UrbanCompany
6180	ac_service_repair	Connector wires replaced (1m)	['₹100', '₹349 (Labour)']	meerut	India	UrbanCompany
730	electricians	Single battery inverter installation	['₹429']	jaipur	India	UrbanCompany
779	plumbers	Pipeline leakage repair	['₹269']	jaipur	India	UrbanCompany
7205	microwave_repair	Power Cord	['₹400', '₹299 (Labour)']	kota	India	UrbanCompany
3304	plumbers	Drainage pipe blockage removal	['₹369']	surat	India	UrbanCompany
4593	ac_service_repair	Water Leakage Repaired- Window AC	['₹449']	coimbatore	India	UrbanCompany

```
[97] uc_data.info()
```

```
<class 'pandas.core.frame.DataFrame'>
RangeIndex: 8530 entries, 0 to 8529
Data columns (total 6 columns):
 #   Column            Non-Null Count  Dtype 
---  ------            --------------  ----- 
 0   service           8530 non-null   object
 1   subservice_name   8530 non-null   object
 2   subservice_charge 8530 non-null   object
 3   city_name         8530 non-null   object
 4   country_name      8530 non-null   object
 5   source            8530 non-null   object
dtypes: object(6)
memory usage: 400.0+ KB
```

```
[98] uc_data.isna().sum()
```

	0
service	0
subservice_name	0
subservice_charge	0
city_name	0
country_name	0
source	0

dtype: int64

The dataset consists of 8,530 entries with 6 columns, which include:

- **service**: The general category of services offered (e.g., "ac_service_repair").
- **subservice_name**: A more specific sub-category of services within the broader service category (e.g., "Inverter PCB repaired").
- **subservice_charge**: The charge for each subservice, including labor costs in some cases.
- **city_name**: The name of the city where the service is offered.
- **country_name**: The country where the service is provided (in this case, only India).
- **source**: Indicates the source of the service (in this dataset, all from "UrbanCompany").

Observations:

The subservice_charge column contains prices, but they are strings and include non-standard characters like currency symbols. This will require cleaning before analysis.

```
[105] import re

      def extract_price(charge):
          prices = re.findall(r'\d+', charge)
          total = 0
          for price in prices:
            total += int(price)

          return total
```

```
uc_data['subservice_cleaned_charge'] = uc_data['subservice_charge'].apply(extract_price)
uc_data.sample(5)
```

	service	subservice_name	subservice_charge	city_name	country_name	source	subservice_cleaned_charge
5700	plumbers	Jet Spray (Installation/ Repair)	['₹96']	jabalpur	India	UrbanCompany	96
911	electricians	Decorative Lights Installation (per 15m)	['₹279']	udaipur	India	UrbanCompany	279
1857	ac_service_repair	Swing blade replaced	['₹400', '₹349 (Labour)']	nagpur	India	UrbanCompany	749
690	microwave_repair	Switch Membrane / Key Pad Repair	['₹1400', '₹299 (Labour)']	jaipur	India	UrbanCompany	1699
920	electricians	Chandelier installation (more than 6 bulbs)	['₹910']	udaipur	India	UrbanCompany	910

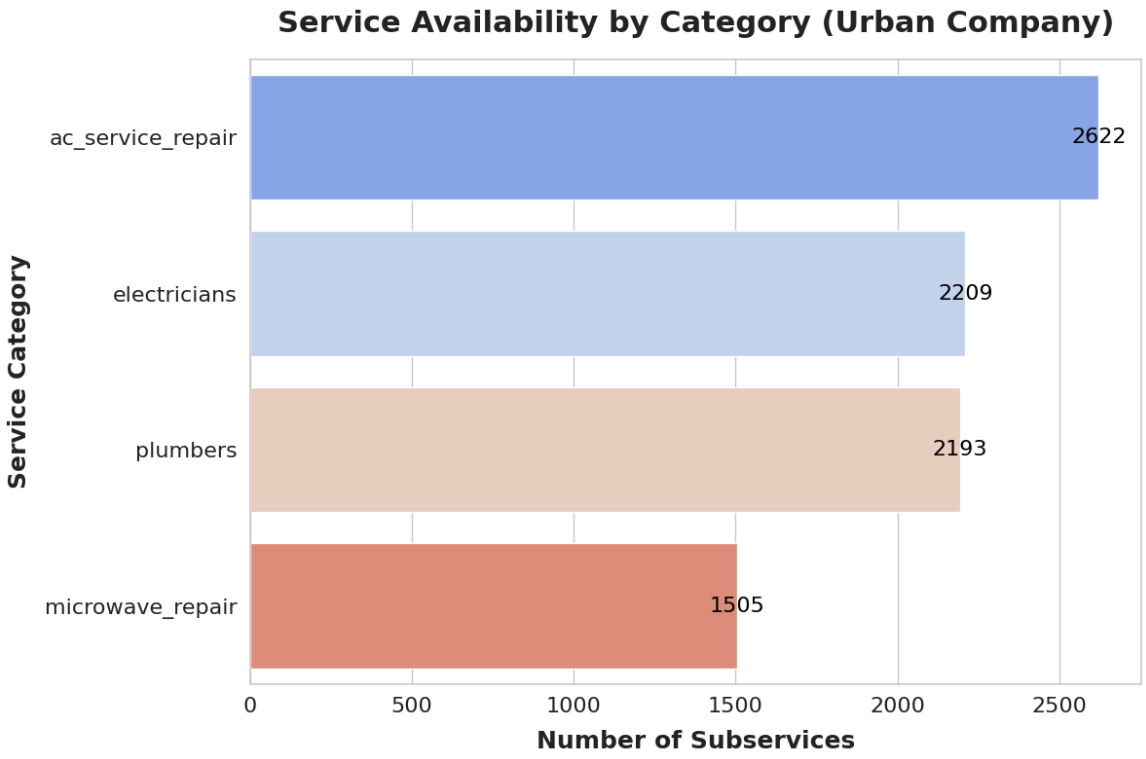
3.5 Key Findings from Urban Company Dataset Analysis:

Service Availability:

The dataset provides a comprehensive overview of the number of registered services Urban Company offers, from plumbing and electrical work to appliance repair services. Understanding the breadth of services can help local vendors identify which categories are most saturated and where opportunities for differentiation exist.

By counting the number of distinct services and listed in the dataset, we can gauge Urban Company's market presence. For instance, if Urban Company lists over 50 distinct electrical services, this highlights a significant investment in that category and suggests a strong demand.

Comparing the number of services offered by Urban Company to those provided by local vendors can highlight competitive advantages or disadvantages. If local vendors are only offering a fraction of the services, it might be necessary to expand their offerings or specialize in specific niches.

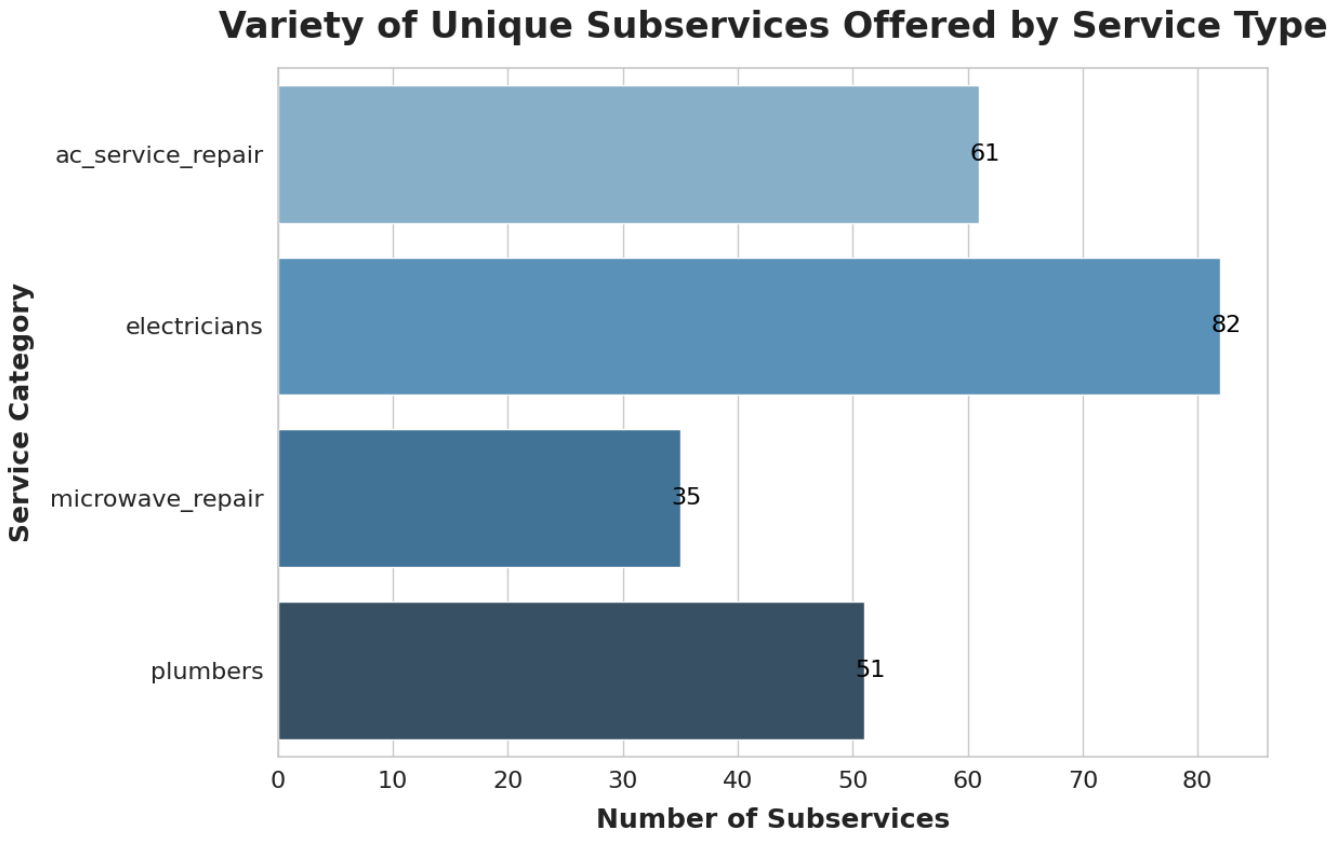


The data reveals a variety of subservices registered under major service categories by urban company.

- **AC Service Repairs**: 2,622 registered subservices.
- **Electricians**: 2,209 registered subservices.
- **Microwave Repairs**: 1,505 registered subservices.
- **Plumbers**: 2,193 registered subservices.

These statistics reflect the extensive range of services offered by Urban Company, indicating significant demand in areas related to home maintenance and repairs. Local vendors can use this data to identify opportunities for growth and competition in specific service categories.

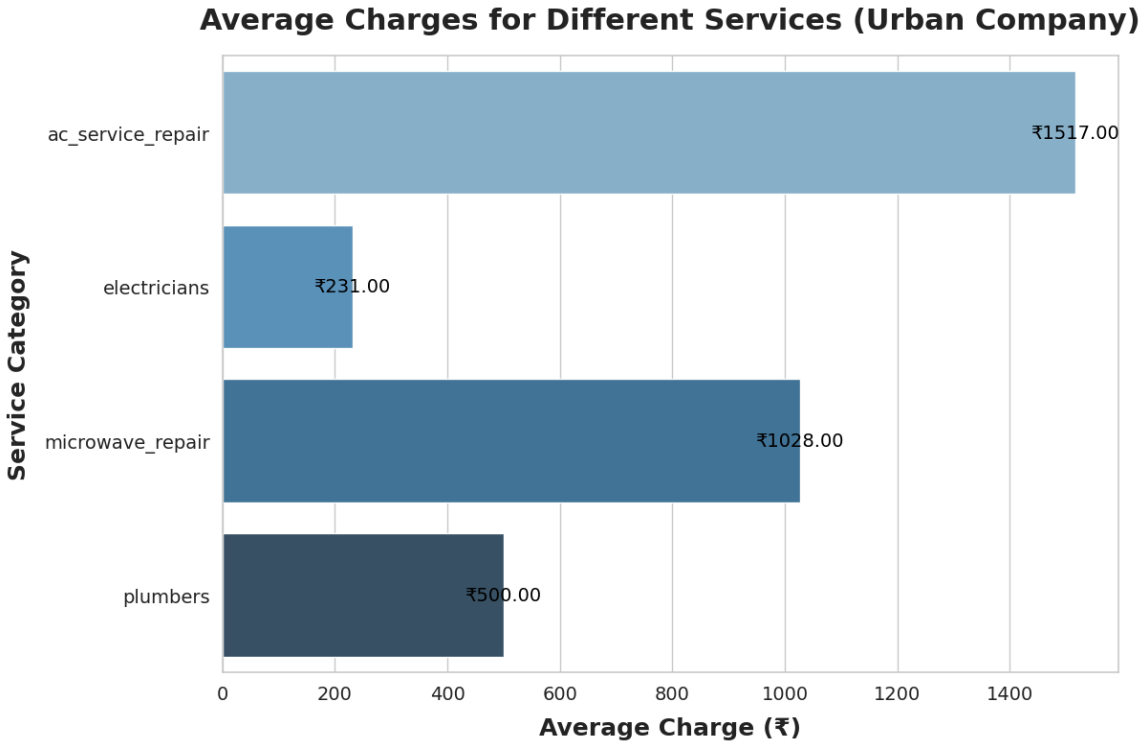
Let's examine the dataset to identify the number of unique subservices offered under each service type. This analysis will help us understand the diversity and specialization of services available, shedding light on the competitive landscape within the market.



***Urban Company offers a variety of services, but certain categories show a lack of subservices. This creates opportunities for local vendors to fill these service gaps, offering customers a wider array of choices.**

Price Comparison:

For the price analysis, I will calculate the average charges associated with each service type. This will involve aggregating the pricing data for all subservices under each category and deriving the average to identify trends in pricing. By understanding the average charges, we can gain insights into how local vendors can competitively price their services while meeting customer expectations. This analysis will be essential for strategizing pricing models that attract more clients and enhance profitability.



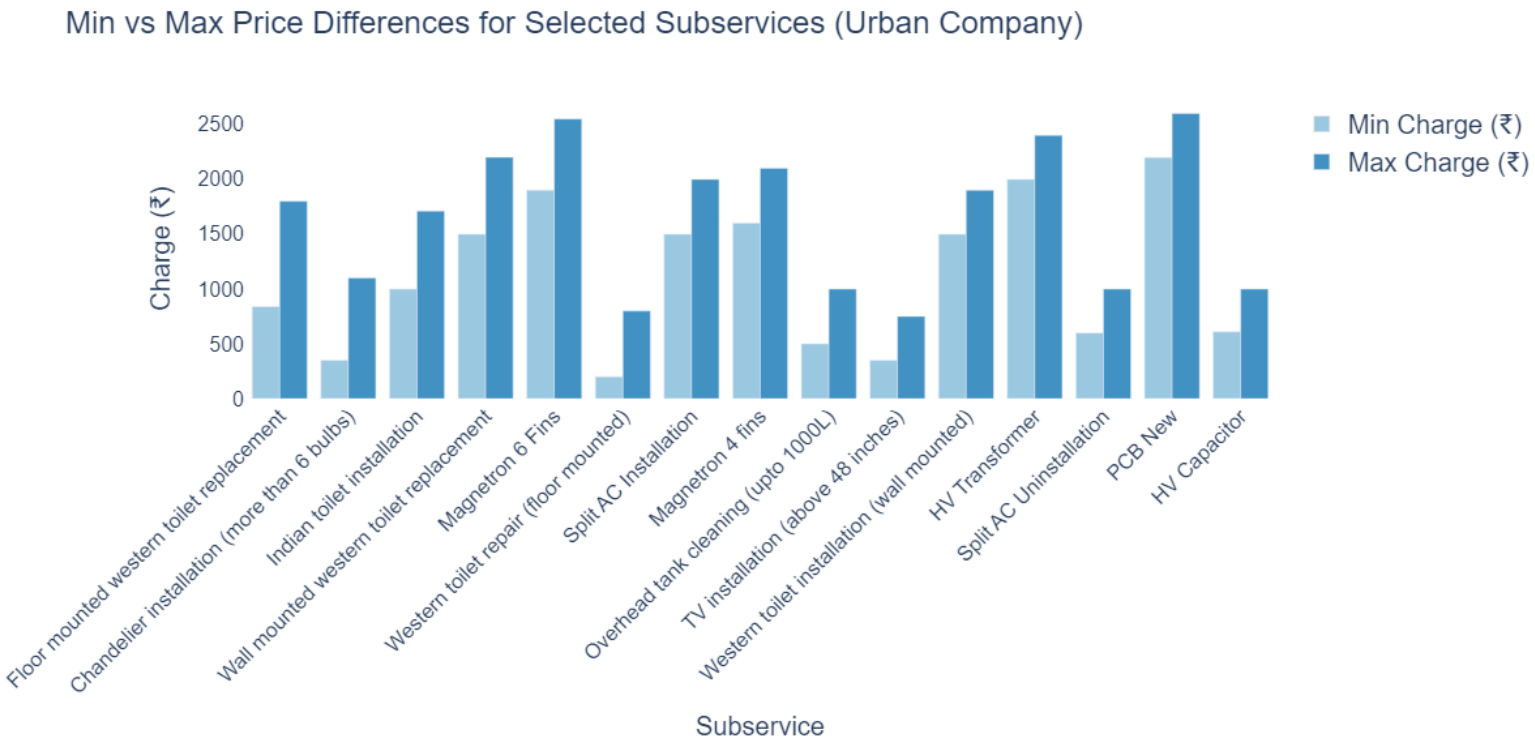
1. **High Price Variation:** Services like "AC Service Repairs" cost around ₹3,500, whereas services such as "Electricians" ₹231.84 or "Plumbers" ₹500.58 are much more affordable. This significant variation in service pricing presents an opportunity for local vendors, who can offer competitive rates, especially for high-cost services.

2. **Opportunities in Specific Markets:** Electricians, who offer diverse services but charge significantly less, represent a market segment where local electricians can fill the gap with competitive pricing and service diversity.

Analyzing the price differences for the same subservice across various states by comparing the minimum and maximum prices available for that service.

This evaluation will aid in appreciating the regional pricing tactics and recognize the diverging trends that can affect the customers' choice. These price variations help in understanding the perception of local suppliers in other markets and how best to price their goods in order to draw more customers.

This analysis is crucial for developing tailored strategies that align with local economic conditions and consumer expectations.



- Many subservices show significant price variation across different states.
- The same service may be more expensive in some regions due to local demand or cost of living.
- Vendors in different states might adjust pricing based on regional competition and customer preferences.
- These variations highlight the need for location-based pricing strategies to remain competitive.

4. Benchmarking

Urban Company, Zomato, Swiggy, Myntra – all the mentioned companies apply benchmarking techniques in order to improve their services and ensure smooth functioning of service for customers. They optimize their activities by analyzing practices and results of the best companies in the industry or refraining from their past successful developments. For example Urban Company provides the same services in all states, while there are geographical differences in how fast Zomato and Swiggy deliver their food. Myntra involves customers to continuously assess product quality and showcase only those products which customers prefer encouraging them to buy more. Continuous benchmarking makes it possible for these platforms to offer the services, enhance service delivery and keep customers happy.

In my “One Service” app, this type of technique in benchmarking will be important in gauging the local vendors’ performance against such retailing behemoths. The implementation of this technique would mean that local businesses would have a more practical and focused service delivery.

5. Applicable Regulations(Government and Environmental)

1. Data collection and Privacy of Regulations of Customers.

2. Government norms for Small Businesses and Street Vendors.

3. Rules against False Marketing.

4. Employment Schemes and laws created by government.

6. Applicable Constraints

1. Lack of initial data to perform algorithms.

2. Convincing Shopkeepers and vendors to use this technique of selling over traditional means.

3. Lack of technical knowledge of vendors.

7. Business Opportunity

Utilizing advanced techniques such as Association Rule Mining for recommending service bundles is already being used by larger platforms like Urban Company, Zomato, and Myntra. When smaller vendors adopt these methods, they stand to gain significantly by analyzing customer behavior patterns.

By understanding which services or combinations are frequently requested together, local vendors can optimize their offerings, manage their budget more effectively, and improve inventory or service management. This will not only increase their sales but also expand their reach, helping them grow in an increasingly competitive market.

8. Concept Generation

The "One Service" app relies on a more sophisticated recommendation engine, employing the **Euclidean distance algorithm** to rank vendors. This algorithm helps calculate a weighted score based on factors such as pricing, customer reviews, and distance from customer. By measuring the closeness of these vendor attributes to individual user preferences, the system can identify the best match for the user.

Here’s how the system enhances the user experience:

- **Vendor Ranking**: The algorithm calculates the similarity between a customer’s needs and available vendors, ranking them from best to worst.

- **Matching Percentage**: Users are shown a percentage score indicating how well a vendor matches their specific preferences (e.g., budget, service type).

- **Improved User Satisfaction**: The top-ranked vendors are tailored to the user's profile, ensuring a smooth, personalized experience.

- **Optimal Selection**: This ranking ensures that customers are connected with the most suitable vendors, benefiting both users and service providers.

This approach not only improves the recommendation accuracy but also ensures that users always get the best possible options based on their requirements, making the service more reliable and personalized.

9. Prototype Selection

9.1 Feasibility

The One Service app prototype is feasible within a timeframe of 2-3 years, supported by several factors:

- **Technology Accessibility**: The necessary technology for vendor listings and payment systems is readily available and continuously improving.
- **Inspiration from Market Leaders**: Much like Zomato and Swiggy, which have successfully expanded to include local vendors, our app can implement similar strategies for user engagement.
- **Leveraging Machine Learning**: The recommendation system will utilize machine learning, leveraging open-source libraries to enhance efficiency and reduce development costs.

This strong technological foundation positions the One Service app as a practical and innovative solution for connecting local vendors with customers seeking reliable and convenient services.

9.2 Viability

- **Support for Local Vendors**: The app directly contributes to the local economy, empowering small businesses and promoting community growth.
- **Growing Demand for Hyper-Local Services**: As evidenced by the rising popularity of services like Zomato and Swiggy, there is a substantial demand for convenient solutions that cater to local needs.
- **Community Engagement**: By fostering relationships between vendors and consumers, the app ensures that both parties benefit, driving sustained usage and loyalty.

9.3 Monetization

- **Pay-As-You-Go Fees**: Small vendors can utilize a flexible pay-as-you-go fee structure, minimizing financial risks while promoting growth.
- **Subscription Plans for Larger Vendors**: These plans provide consistent revenue and enhanced features, encouraging long-term partnerships.
- **Premium Listing Fees**: Vendors seeking increased visibility can opt for premium placements, similar to strategies used by Swiggy and Zomato.

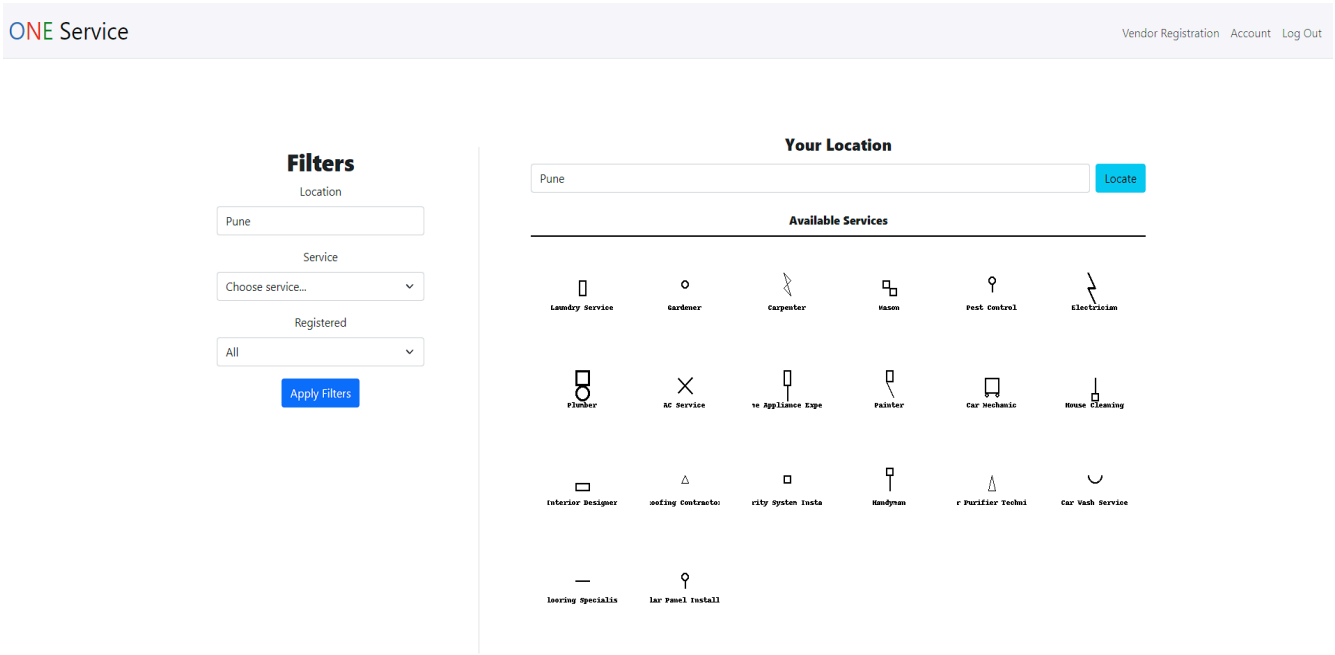
This comprehensive approach not only ensures a steady revenue stream but also maximizes the app's potential for long-term success, akin to the successful monetization strategies employed by established platforms.

10. Final Product Prototype / Product Details

10.1 App Prototype and Features

The One Service app prototype is designed to empower users in finding and connecting with local vendors offering essential services such as electricians, plumbers, and cleaners. Key features of the app include:

- **Vendor Browsing**: Users can explore a variety of local service providers, making it easy to find the help they need.
- **Service Categorization**: While the app currently does not classify vendors into budget, mainstream, or premium segments, it lays the groundwork for future enhancements in this area.
- **Dummy Data for Testing**: The app utilizes dummy data stored in a .db file, which enables thorough testing and verification of the recommendation system's functionality.
- **User-Friendly Interface**: The app prioritizes user experience, ensuring that navigating through services is intuitive and efficient.



10.2 Recommendation System

The recommendation system is a core component of the One Service app, utilizing machine learning techniques to enhance user satisfaction. Features include:

- **Personalized Recommendations**: By analyzing user preferences—such as price sensitivity and service quality—the app effectively recommends local vendors that best meet individual needs.

- **Euclidean Distance Algorithm**: The recommendation system employs the Euclidean distance algorithm, which helps measure similarities between user preferences and vendor offerings, ensuring that customers are presented with the most relevant options.

- **High Satisfaction Rates**: This targeted approach not only helps customers easily find suitable vendors but also significantly increases the likelihood of customer satisfaction and repeat business.

By integrating these features, the One Service app aims to create a seamless experience for users, ultimately enhancing the competitive landscape for local vendors.

Recommended vendors for you

Service	Business Name	Visit Charge	Phone Number	Email	Rating	Distance	Vendor Match
Electrician	Electrician Expert 197	₹349.00	9170168184	electricianexpert197@example.com	2.0	10 KM	70%
Electrician	Electrician Expert 290	₹220.00	9330146940	electricianexpert290@example.com	2.0	21 KM	57%
Electrician	Electrician Expert 343	₹811.00	9288931374	electricianexpert343@example.com	2.0	5 KM	42%
Electrician	Electrician Pro 610	₹1,327.00	9747843447	electricianpro610@example.com	3.0	16 KM	19%
Electrician	Electrician Service 220	₹1,233.00	9796267887	electricianservice220@example.com	3.0	22 KM	18%
Electrician	Electrician Expert 634	₹1,119.00	9540111146	electricianexpert634@example.com	3.0	27 KM	13%
Electrician	Electrician Expert 259	₹557.00	9330198951	electricianexpert259@example.com	1.0	30 KM	5%
Electrician	Electrician Pro 576	₹1,444.00	9778103400	electricianpro576@example.com	2.0	19 KM	4%
Electrician	Electrician Service 745	₹1,592.00	9619685122	electricianservice745@example.com	2.0	9 KM	-3%
Electrician	Electrician Expert 486	₹1,533.00	9130048707	electricianexpert486@example.com	4.0	10 KM	-3%

```
1 usage
def normalize_scaler(data):
    scaler = MinMaxScaler()

    columns_to_normalize = ['visit_charge', 'vendor_rating', 'vendor_distance']
    data[columns_to_normalize] = scaler.fit_transform(data[columns_to_normalize])

    return data


2 usages
def recommend_vendors(city, profession, user_preference):
    vendors = get_vendors(city, profession)

    if vendors.empty:
        return []

    original_vendors = vendors.copy()
    normalized_vendors = normalize_scaler(vendors)

    preferences = {
        "budget": [0.01, 0.6, 0.3],  # low cost, medium rating, distance bit a problem
        "mainstream": [0.3, 0.8, 0.3],  # medium cost, a bit high rating, distance bit a problem
        "premium": [0.9, 0.9, 0.2]  # cost doesn't matter, high rating, low distance matters
    }

    original_vendors['euclidean_distance'] = normalized_vendors.apply(
        lambda row: euclidean(
            u: [row['visit_charge'], row['vendor_rating'], row['vendor_distance']],
            preferences[user_preference]
        ), axis=1
    )

    original_vendors['match_percentage'] = original_vendors['euclidean_distance'].apply(
        lambda dist: round((1 - round(dist, 2)) * 100)
    )

    sorted_vendors = original_vendors.sort_values(
        by='match_percentage', ascending=False
    ).reset_index(drop=True)

    sorted_vendors_list = sorted_vendors.to_dict(orient='records')
    return sorted_vendors_list
```

GitHub Link: *https://github.com/Baniya-sen/*

11. Business Modelling

To ensure the long-term viability and growth of the "One Service" platform, a comprehensive business model will be adopted. This model leverages multiple revenue streams to target both small-scale vendors and larger service providers, ensuring scalability and flexibility in catering to diverse market segments.

11.1 Revenue Model

The revenue model for the One Service platform will be based on three primary income streams: **transaction-based fees**, **subscription plans**, and **premium listings**. This hybrid approach will accommodate vendors of all sizes, from small local service providers to larger chains, allowing for tailored revenue generation.

Key Revenue Streams:

- **Transaction-Based Fees**:
    - **Small vendors** will pay a percentage-based fee per transaction. This is ideal for vendors who are just starting out or have a small number of monthly transactions.
    - **Example**: A 5% transaction fee on service charge of ₹500 results in ₹25 paid to the platform. If 100 transactions occur in a month, revenue from a single vendor would be ₹2,500. ₹2,500 * 100 vendors hits ₹2,50,000.
- **Subscription Plans**:
    - **Larger vendors** will have access to monthly or yearly subscription plans that allow them to use the platform without worrying about individual transaction fees.
    - **Example**: A premium subscription at ₹3,000 per month for larger vendors would provide services such as analytics, performance reports, and featured listing opportunities. With 500 large vendors subscribing, monthly revenue could hit ₹15,00,000.
- **Premium Fees for Enhanced Customer Service:**:
    - Customers can pay a premium fee of ₹250 for enhanced service features, ensuring quicker response times and better support.
    - If 1,000 customers opt for this premium service, it generates an additional ₹2,50,000 per month, contributing significantly to overall revenue.

Revenue Summary:

Source	Potential Monthly Revenue
Transaction-Based Fees	₹2,50,000 (small vendor example)
Subscription Plans	₹15,00,000 (500 large vendors)
Premium Listings	₹2,50,000 (1000 customers)
Total Monthly Revenue	**₹20,00,000**

By diversifying revenue streams, the platform can appeal to a wider range of vendors while ensuring consistent income growth.

How We Will Achieve This:

1. **Vendor Acquisition**:
    - **Incentives for Early Adopters**: Offering discounts or lower transaction fees to early adopters to build a vendor base quickly.
    - **Partnerships**: Collaborating with local associations, such as **Urban Company** vendors or other local service providers, to promote the platform.
2. **Subscription Upsell**:
    - Providing premium features like **detailed performance analytics**, **personalized customer insights**, and **increased visibility** to attract larger vendors into subscription plans.
3. **Premium Listings**:
    - Using **data analytics**, we will identify vendors that benefit the most from premium visibility and target them with compelling marketing to encourage upgrading.
4. **Continuous Product Improvement**:
    - Through **user feedback** and regular updates, the platform will adapt its features to meet evolving customer and vendor needs, making it an indispensable tool for all users.

This multi-faceted revenue and financial model ensures sustainable growth, empowering local vendors to succeed and driving long-term profitability for the One Service platform.

11.2 Financial Model

Financial equation is just the simple equation which contain your total profit /revenue basically total revenue = your product unit cost * total number of sales - cost to produce

Let's say:

- **Subscription Plan Cost** = ₹1,500 per month
- **Number of Subscribed Vendors (x)** = variable based on how many vendors join
- **Running Costs** (fixed monthly operational cost) = ₹50,000

The **Total Revenue for a month** = Subscription Plan Cost * Number of Vendors - Running Costs

So, if you had 200 subscribed vendors:

Total Revenue:

₹1,500 * 200 = ₹3,00,000

₹3,00,000 - ₹50,000 = **₹2,50,000**

This makes the revenue a function of the number of subscribed vendors (**x**):

Revenue (y) = ₹1,500 * **x** - ₹50,000

This means the more vendors you acquire, the higher the revenue, minus the fixed costs.

12. Conclusion

The use of recommendation systems, similar to those seen in platforms like Zomato, Swiggy, and Urban Company, can offer local service vendors key insights into customer preferences and pricing strategies. By applying models like Euclidean distance, small businesses have the opportunity to optimize their offerings, attract more customers, and improve their competitive edge. This presents a significant opportunity for growth and sustainable business development, helping vendors enhance their operations and achieve long-term success.