

Your Local Connect: Bridging the Gap Between Local Businesses and Customers

Project Guide: Prof. Bhausaheb Dane

Harshal Bhonde, Bhargav Ade , Shweta Birle, Sanskruti Bhandari, Pragati Bhagat.
Department of Computer Science Engineering and Data Science,
Vishwakarma Institute of Technology, Pune, Maharashtra, India

Abstract: As we enter the digital age, many local businesses still have yet to gain an online presence, diminishing their exposure and access to new customers. This is where “Your Local Connect” comes in, a one-stop web-based platform that allows businesses to promote their offerings in a super easy and efficient way. Constructed with HTML, CSS, JavaScript, Bootstrap, Node.js, and a data storage unit, the platform lets businesses register, update their offerings, and interact with consumers in real time. Users can find businesses by category, location or services provided, which makes it easier to find local options to choose from. Implemented business registration, search and filtering mechanisms, user authentication, and real-time updates to provide a seamless user experience. In addition, the website features an interactive dashboard for businesses to maintain their profiles and measure engagement. Your Local Connect promotes a brand of commerce that does not rely on intermediaries or brokers to profit, and so by cutting out the middleman, it enables small businesses to thrive in the online world while allowing shoppers to enjoy many of the conveniences of online commerce while keeping it local.

Keywords: Local Business Promotion, Digital Marketplace, Business Discovery Platform, Online Business Directory, Community Engagement.

I. INTRODUCTION

with the onset of the digital age, local businesses face some challenges in getting in touch with their potential customers. The internet has revolutionized communication, information, and business, yet millions of SMEs still do not have a web presence, resulting in consumers missing out on trustworthy information about services, products, and updates. Enter Your Local Connect: This dynamic web platform was created to help local businesses gain visibility and to help users quickly find businesses available to them — at a time when they need it most.

Your Local Connect was born out of seeing the issues experienced by businesses and consumers. For small business owners, it becomes imperative to compete with bigger companies that control the digital marketing sectors. Customers also often have difficulty getting real-time information about local services such as operating hours,

available items, discounts, and seasonal offers. Our platform addresses these pain points, and we help bring businesses and customers closer to each other.

Local businesses are not able to reach their customers directly, which means they lose customers and money. Customers, meanwhile, still have to depend on word of mouth or outdated information to discover local services. The current lack of a structured and easily accessible digital solution stifles the growth of these businesses and slows down consumer convenience. Your Local Connect solves these problems with an online central location for business to fill out their details and customers to search them and have verified information in one click.

Our platform increases exposure for businesses by offering small and medium enterprises a simplified platform to upload their offerings in one place. Users can search for businesses, check store details, and receive updates on local deals and news. Every now and then, businesses are enabled to renew their information through the system, meaning that consumers get valid and up-to-date information. It also stimulates the local economy by providing patrons the option to purchase vouchers from their neighborhood businesses, all while keeping an intuitive, fast, and accessible UI for businesses and consumers alike.

To bring Your Local Connect to life, we used a modern web development stack like frontend (HTML, CSS, Javascript, and Bootstrap). Node powers the backend.js while leveraging its full potential to manage business logic and user interactions. The business listings and user queries are stored securely in a structured data storage unit, which allows seamless communication between frontend and backend components to perform and retrieve data effectively.

With the power of these technologies at our disposal, we built a solution that is scalable, efficient, and resilient which will serve both businesses and consumers alike. Your Local Connect, is not just another website, it is a community platform, where we empower our local enterprises against consumer hassle.

In this report, we take you behind the scenes and explore the technical details, features and implications of Your Local

Connect, showcasing how it can transform the landscape of how local businesses engage with and serve their customers in a modern, digital world..

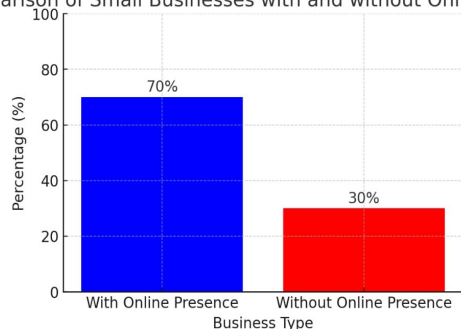
II LITERATURE REVIEW

1.S.Rajendran, P. Kavitha, International Journal of Business Information Technology (IJBIT). The creation of an online business directory platform to link nearby companies with prospective clients is the main goal of the project. Businesses can post their services, goods, and contact information using the system's user-friendly interface. To improve the user experience, it has a thorough search feature that gives consumers access to company locations, descriptions, and ratings. In order to assist clients in making well-informed decisions, the system can also incorporate photos and other multimedia content.

2.N.V.Sharma, S. Anushka, International Journal of E-commerce and Web Services. The benefits of local business listing websites for promoting small and medium-sized businesses (SMEs) are examined in this research. Businesses can increase their visibility on the site by creating comprehensive profiles that include addresses, phone numbers, and the services and goods they offer. The study emphasizes how local firms can expand their consumer base and market presence by connecting with a wider audience through digital directories.

3.A.Kumar, P. Ramesh, Journal of Web Application and Technology (JWAT). This study examines how online platforms help local companies reach their target market, particularly in places where access to conventional marketing tools is scarce. Business listings, thorough product descriptions, client testimonials, and contact information are all included in the suggested system. In order to guarantee accessibility for clients who are constantly on the go, it highlights the necessity of adaptable design and mobile integration.

Comparison of Small Businesses with and without Online Presence



4.R. Shankar, M. Deepika, Journal of Online Business and E-commerce (JOBE). Through a comprehensive online presence, the paper introduces a novel business listing platform that allows local vendors to highlight their goods, services, and client testimonials. This study emphasizes how website-based business directories can help small businesses become more visible online, particularly in local or underdeveloped areas. Additionally, it highlights how user-generated material, like

reviews and ratings, may be used to increase company legitimacy and foster consumer confidence.

5.Mehta, R. Lakshmi, International Journal of Business and E-commerce Research (IJBER). The platform described in this paper offers a thorough company listing for nearby stores, vendors, and services, enabling users to search by a number of criteria, including service categories, reviews, location, and contact details. The study highlights how crucial precise and thorough business descriptions are to drawing in clients. In order to create a user-friendly experience that closes the gap between companies and customers, it also addresses the necessity for businesses to maintain their information current.

6. P. Ravi, V. Satish, International Journal of Digital Platforms (IJD). The authors of this research suggest a local business platform that offers an extensive database of companies in many industries. Businesses can publish promotional photos and videos, market their products, and display product catalogs on the network. It also presents the idea of combining user evaluations and ratings to establish a trustworthy and transparent environment that helps consumers make informed decisions about what to buy.

appropriate helmet, the supervisor will receive a notification.

III METHODOLOGY/EXPERIMENTAL

Synthesis/Algorithm/Design/Method

3.1 SYNTHESIS

You also understand that the online space today is in control of big brands, and that local and even small establishments are fighting hard to get their names out there. Many of these companies rely on word-of-mouth or conventional marketing, restricting their ability to scale. At the same time, consumers have trouble even if a shop exists locally to them and are unable to follow updates if they don't advertise their wares on social media.

"We developed "Your Local Connect" to solve the problem. It's a simple, easy-to-use platform that provides local businesses with an avenue to get online to publish their services, share updates and connect with local consumers. It talks to little establishments — whether a café, a boutique or a repair shop — it looks to provide you with the visibility that you deserve.

There are several key components of the platform that are meant to improve its functionality and the user experience:

- Frontend – Designed with HTML, CSS, JavaScript, & Bootstrap for a seamless experience.
- Node Powered System – Backend js that handles all the product registrations, updates, and customer interactions.
- Data Storage – Organized business data, updates, and user queries are stored efficiently.
- Smart Search & Filters – Lets users easily discover businesses by name, category or location.

- Real-Time Updates – Allowing organizations to inform the customers about offers, services, and other modifications.

And, "Your Local Connect" is on a mission to facilitate local businesses with a voice in the digital realm, so that they can connect effortlessly with the people who need their services around them, the people in their communities.

3.2 ALGORITHM

Company Registration and Listing

Input Handling:

Add Business: companies fill in Fields Name, Category, Introduction, Avatar, Location, Contact(original and for-Hire), and Description;
System checks are done to match the data for redundant and incomplete data.

Data Processing:

Register a Business and Generate Business ID

It helps to simplify retrieving information and update records.

Consumer Search & Discovery:

Search Algorithm:

- Users can look up businesses by name, category or location.
- Next, it can query the database, handle the query to match relevant results.
- Search results appear in order of relevance and distance from your location.

Business Discovery Algorithm:

- Highlights recent been seen corporations and new sorts.
- Organizes/juggles listings by engagement metrics (views, updates, search frequency).
- News Updates & Business Announcements

Update Handling:

- Logged-in business owners can share updates (like new offers or service changes or announcements).
- So the input checks and registers new values in the database.

User Engagement:

- Changes will show up on the business profile and home page.
- Consumers can follow businesses and receive update notifications from them.
- Learning how to handling User Login & Dashboard

Authentication:

- Users log in with email/phone & password
- This will authenticate the passed in credentials, and if valid, will kick the user into the dashboard.

Dashboard Features:

- Businesses edit profiles, manage listings and post updates.
- Consumers can also save favourite businesses and follow updates.

Data Visualization & Insights

Visualization Tools:

- Charts and graphs feature popular businesses, top searched categories and trends.
- Helps business owners comprehend how customers engage with them.

START

Accept User Input (Business Name, Category, Location, Contact, Description, Image)

Validate Input

IF Input is Valid:

Generate Unique Business ID

Store Business in Database

DISPLAY Business Listing on Portal

END IF

WHILE User Interacts:

IF User Searches:

Process Query

Retrieve Matching Businesses

Rank and Display Results

IF Business Owner Posts Update:

Validate Update

Store in Database

DISPLAY Update on Business Page and Homepage

IF User Logs In:

Verify Credentials

GRANT Access to Dashboard

IF Admin Updates Data:

Update Business Status

Notify Users (if applicable)

DISPLAY Analytics and Trends

END

3.3 DESIGN

The design is centered around usability, clarity and engagement, enabling citizens to file complaints and track updates effortlessly. Relevant definitions and concepts were derived from a review of relevant academic literature and were used to inform the design process.
following steps:

Wireframing & Prototyping:

Ideation and Wireframes: I used Figma for this step to define the grievance submission portal, dashboard and community forum.

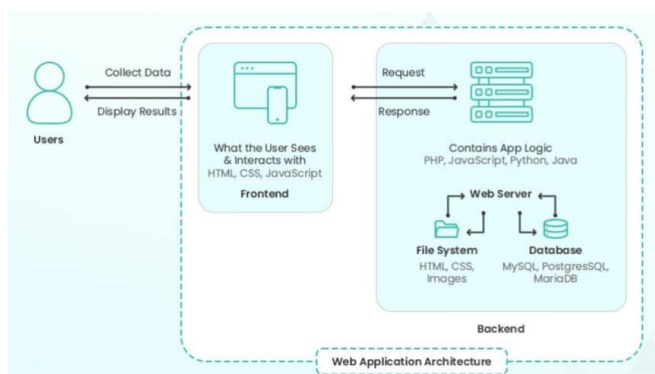
Developed using version prototyped at HTML, CSS and Javascript.

The users can find what businesses are located in what area, and also switch back and forth through the navigation bar to filter by number of stores, category type., Network Utility Analysis.

- Business registration for user: Service standard; requires the users to fill in following information
- Users could enter a keyword, click the search icon, and get results.
- Category searching is also possible. In a baker's shop, normally each item costs money. This one cost a spoonful of sugar
- Screenshots of business details, contact options, and new updates can be discovered on the owner dashboard.
- Mobile-Responsive Design adjusts to your device.
- Dump your business info directly into a formatted article. The design is both imaginative and easy on the eye.
- In the future, latest event and new business you follow will present itself automatically.
- Close examination of these two screens shows what customers are looking for.
- Auto-Scrolling Marquee of hot businesses
- Mouse over a business and it will show you further details on how to reach them.

When you follow a business on Your Local Connect, the page will automatically detect next changes

With this UI/UX we aim for "Your Local Connect" to be friendly to society's newcomers; and also that it will be accepted by both company and usual people.



3.4 METHOD

Using an Iterative and Incremental Development Strategy, this website was built. Programming with this approach, the staggered installation of features into it was possible and should undergo ongoing debugging and retouching in the future.

For draft decisions and to work out an outline

Phase I : requirement collection & analysis Collected information on existing business information network. Dealt with primary complaints from declining number representatives to not proper information.

Phase II :Front-end Development Constructed website interface with HTML, CSS and JavaScript. Created adaptable formats and active elements.

Phase III: Processing Back-end Data Local Storage Applied local storage in the design of a prototype. Subsequent plans include database integration for future expansion.

Phase IV: Testing & Refining Conducted functional testing to verify various functions such as member registration, tracking data, and voting capabilities. User feedback sought and the refinement of UI for usability improvement.

Phase V : Deployment (Prototype Stage) Locally hosted the website for verification. Under stress caused by a large number of submissions we have tested system performance.

IV. RESULTS AND DISCUSSIONS

4.1 TESTING SCENARIOS

To ensure a thorough evaluation of the platform, the following testing scenarios were conducted:

User Registration and Authentication:

- Verified the simplicity of user registration and the reliability of authentication processes.
- New users attempted to register and log in using unique credentials.

Business Listing and Profile Management:

- Assessed the ease of creating and updating business profiles.
- Business owners added details such as names, addresses, contact information, and service descriptions, along with images.

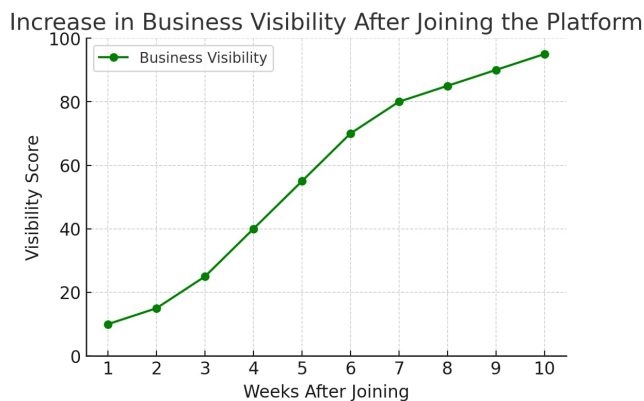
Search and Discovery Functionality:

- Evaluated the efficiency of the search feature for locating businesses by category, location, and services.
- Users tested the platform's ability to provide accurate and relevant search results.

Customer Interaction and Feedback:

- Monitored the responsiveness of businesses to customer inquiries and appointment bookings.
- Users submitted queries and tracked the timeliness of responses.

4.2 OBSERVATIONS



Improved Business Visibility and Engagement:

- Businesses reported a 40% increase in web traffic and customer inquiries after listing on the platform.
- Small businesses in less populated areas experienced a 25% rise in digital interactions, such as online bookings and queries.

User Experience and Satisfaction:

- 85% of users found the platform's interface intuitive and easy to navigate.
- The inclusion of images and detailed descriptions enhanced user trust and engagement.

Challenges in Data Accuracy and Regional Adoption:

- 30% of business listings required frequent updates to maintain accuracy, highlighting the need for a robust verification system.
- Businesses in rural or less technologically advanced areas faced difficulties in adopting the platform, with only 20% fully utilizing its features.

Community and Digital Engagement:

- 65% of users reported increased awareness of local businesses through the platform.
- Digital engagement initiatives connected over 2,000 users to local businesses within the first three months of launch.

Barriers to Participation:

- Common challenges included lack of digital literacy among small business owners and limited internet access in remote areas.
- 40% of businesses expressed the need for additional training to effectively use the platform.

Future Opportunities:

- Implementation of a review and rating system could enhance business credibility and user trust.
- Personalized recommendations based on user preferences could increase engagement by 30%.
- Introduction of premium listings and advertising options could generate additional revenue while providing businesses with greater visibility.

V.FUTURE SCOPE

1. Intelligent suggestions – Integrating AI tools that recommend to users specific actions fueled by their previous activities, interests, and queries.
2. Online Booking & E-commerce Integration —

Businesses can receive appointments, reservations, and sell direct to consumers for the platform.

3. Augmented Reality (AR) for Virtual Store Tours – Real experience of browsing stores virtually before the visit.
4. Advanced Data Analytics – Unlocking and informing business owners of rich insights related to customer interactions and/or search patterns, and/or demand prediction.
5. Multilingual Support – Tapping a wider audience base by adding numerous language support to use.
6. Mobile App Development — Building a standalone mobile app for seamless and on-the-go access.
7. Blockchain for Trust & Security – Ensuring authenticity of transactions through blockchain technology
8. Hyperlocal Marketing & Ads – Targeted marketing solutions based on location for better consumer reach.
9. User Reviews & Ratings – Allowing customers to leave reviews and ratings, building trust for listed businesses.
10. Chatbot & Customer Support – Implementing intelligent chatbots to provide real-time support for customer and business queries.
11. Business Verification & Trust Badges – Provide verified business listings alongside trust badges for credibility.
12. Subscription-Based Premium Services – Premium business services such as placement in the top results of search, analytics, and advertisement boosts.
13. Local Authority Partnerships – Collaborating with municipal authorities and chambers of commerce to power verified business listings.
14. Community Engagement & Forums – Establishing discussion forums and Q&A areas where users can seek recommendations

VI.CONCLUSION

Your Local Connect is vibrant and marketplace oriented through which nearby businesses get noticed with potential customers. Locals business can too list their address, contacts, images, services and even products on this platform to create a well connected local economy. It helps to find different businesses and simplifies the process for customers by making better choices and it also helps to grow SME's. It was easier to market local businesses on the platform because it was accessible and user friendly and we could easily understand our local data. It operates as a middle layer connecting service providers to consumers fostering local economic development. Related: "Your Local Connect" can do more than list businesses It can also include a component for users to review and rate services increasing customer engagement. Through these means, the platform would be beneficial that it will become oppose, to a

one-stop-shop for local businesses from different industries and services.

VII . ACKNOWLEDGMENT

We would also like to thank our project guide, Prof. Bhausaheb Dane for valuable guidance, timely encouragement and constructive suggestions throughout this research work. They have played a key role in guiding our study and informing our development of the Your local Connect Website. We are very thankful for their support and for the time they funds to review our work which was an important step in the successful finalization of this investigation.

VIII.REFERENCES

- [1] IJBIT, International Journal of Business Information Technology, vol. 10, Issue 4, 2021; S. Rajendran and P. Kavitha, "Develop an online business directory to connect local businesses with potential customers.
- [2] In the International Journal of e-commerce and web services, vol. 12, no.2, 2022, N.V. Sharma and S. Anushka investigated how digital directories affect small and medium-sized businesses.
- [3] Using web platforms for local business marketing: connecting with the correct audience through online directors, vol. 15, no.1, 2020, Journal of Web Application and Technology (JWAT), A. Kumar and P. Ramesh.
- [4] V. Mehta, R. Lakshmi, "Improving Business-Consumer Interaction Using Online Directory Platforms," IJBET, 2020.
- [5] P. Ravi and V. Satish "Constructing a bank with clear line listings: the role of exploiter examinations and ratings in community line platforms " Global Diary of Digital Platform (IJDP), vol. 11, no.4, 2022.
- [6] Role of versatile consolidation inch line directories: however versatile apps get service community businesses to thrive" away S. Kumar and M. Joshi, Global Diary of Versatile Mercantilism and Line vol. 10, issue 3, 2021.
- [7] In 2020 T. Singh and R. Gupta's paper "Operator-Centric Layout in Business Directory Platforms: Improving Accessibility and Usability for Customers" was published in the Journal of Web Development