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A STUDY ON USER SATISFACTION ON CHALO APPLICATION

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ABSTRACT:

This study investigates user satisfaction with the Chalo app, a tool for tracking public transport. A survey targeting a diverse user base evaluated factors such as usage frequency, accuracy of bus timings, network reliability, and overall app usability. Most users learned about Chalo through social media and personal referrals, with growing concerns around security and privacy. Findings indicate that reliable real-time information and strong connectivity are essential for user satisfaction. Feedback points to a need for enhancements in location tracking and bus display features. By comparing Chalo to competitors like Moovit and Google Maps, the study establishes performance benchmarks. The conclusion stresses the need for continuous app development to improve user experience and adapt to changing demands in urban transport.

Keywords: chalo application, user satisfaction

Introduction:

Chalo is a ground-breaking mobile application designed to transform the public transportation experience for urban commuters. In a rapidly moving world where efficiency and convenience are critical, Chalo provides a user-focused platform that tackles the common obstacles faced by individuals using public transport. The app offers real-time tracking for buses and other transportation modes, enabling users to plan their journeys more effectively, thereby reducing wait times and enhancing overall travel efficiency.

Developed in response to the increasing demand for dependable public transport solutions, Chalo features a comprehensive set of tools aimed at delivering a smooth commuting experience. These include precise bus timings, live location updates, route navigation, and information on nearby bus stops. Such features not only simplify the commuting process but also furnish essential information that assists users in making informed travel decisions, positioning Chalo as a vital resource for daily commuters.

The app's intuitive interface is designed for users of all ages and tech-savviness, ensuring easy access to its features. Emphasizing clarity and simplicity, Chalo allows users to navigate its various functionalities without hassle. Additionally, the app is dedicated to ongoing enhancement and innovation, frequently updating its offerings based on user input and technological advancements.

As urban populations continue to grow and public transportation systems expand, Chalo plays a significant role in helping commuters navigate their cities with assurance and ease. The app not only improves accessibility but also encourages the use of public transport, aiding sustainable urban development by alleviating traffic congestion and reducing the environmental footprint of commuting.

This study aims to assess user satisfaction with the Chalo application, concentrating on the features and functions that notably impact the user experience. With mobile applications becoming indispensable for accessing public transportation information, understanding user perceptions and preferences is increasingly important. This research seeks to uncover the factors influencing user satisfaction, providing insights that can enhance service delivery and meet the diverse needs of commuters.

To gather data, the research utilizes a structured questionnaire that captures a wide range of user experiences and feedback. Key areas of focus include the frequency of app usage, duration of engagement, and awareness of competing applications. By analyzing how often and how long users interact with Chalo, the study aims to identify usage patterns that can inform future developments.

Furthermore, the study looks into essential user priorities such as the accuracy of bus timings and locations, reliability of the network, and overall usability of the app. These aspects are crucial for creating a positive user experience and significantly affect the likelihood of users recommending the app to others. Gaining insights into these elements will help developers prioritize improvements that resonate with user expectations.

The research will target a diverse demographic, ensuring a comprehensive understanding of user perspectives across different age groups, educational levels, and technological proficiency. This approach will facilitate the identification of both Chalo's strengths and areas that require enhancement, offering a well-rounded view of user satisfaction.

Ultimately, the findings from this study aim to contribute to the continuous development of the Chalo application. By emphasizing user feedback and preferences, the research will guide future updates and enhancements, fostering a better user experience. In this way, the study seeks to not only elevate user satisfaction but also reinforce Chalo's position within the competitive public transport app landscape. By consistently addressing user needs, Chalo can play a pivotal role in shaping the future of urban commuting.

Methodology:

This study combines both primary and secondary data sources. Primary data were collected through a well-structured questionnaire, employing a convenience Sampling Method to select 119 respondents. Secondary data were gathered from various reference materials, including books, journals, research articles, magazines, and websites. The research is classified under a descriptive research design, which focuses on describing the characteristics or behaviours of a phenomenon without manipulation or control. Descriptive research aims to provide an accurate representation of the subject under investigation and is commonly used to address questions such as "what," "who," "where," "when," or "how" about a specific topic.

Objective:

1. To study user satisfaction towards chalo application.
2. To identify the key features that consumers value the chalo application
3. To analyse demographic factors in relation to consumer preferences.
4. To analyse the network and service effect on user satisfaction.

Data Analysis and Interpretation

Percentage analysis:

1 AGE OF THE RESPONDANT:

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	below 18	8	6.6	6.7	6.7
	19 to 25	91	74.6	75.8	82.5
	26 to 35	9	7.4	7.5	90.0
	36 to 45	6	4.9	5.0	95.0
	above	6	4.9	5.0	100.0
	Total	120	98.4	100.0	
Missing	System	2	1.6		
Total		122	100.0		

INTERPRETATION:

The table reveals that 74.6% of respondents are between 19 and 25 years old, indicating a significant emphasis on this age group. Only 6.6% are under 18, while 7.4% fall within the 26 to 35 range, and 4.9% are in both the 36 to 45 and above 45 categories. The cumulative percentage shows that 82.5% of respondents are from the younger age groups. With 2 responses missing, the data predominantly represents younger adults, which could restrict the broader applicability of the results.

2.GENDER OF THE RESPONDANT:

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Male	60	49.2	50.0	50.0
	female	60	49.2	50.0	100.0
	Total	120	98.4	100.0	
Missing	System	2	1.6		
Total		122	100.0		

INTERPRETATION:

The table shows that the respondents are evenly split by gender, with 49.2% identifying as male and 49.2% as female, resulting in a balanced sample. Both genders make up 100% of the valid responses, indicating no significant bias in the survey. There are 2 missing responses, which account for 1.6% of the total. This gender balance suggests that the findings reflect the views of both males and females equally. Overall, the data indicates fair gender representation in the survey.

3.EDUCATION LEVEL:

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	no formal education	5	4.1	4.1	4.1
	10th qualified	2	1.6	1.6	5.7
	12th qualified	9	7.4	7.4	13.1
	Undergraduate	68	55.7	55.7	68.9
	Postgraduate	38	31.1	31.1	100.0

	Total	122	100.0	100.0	

INTREPRTATION:

The table outlines the education levels of respondents, showing that 55.7% hold undergraduate degrees, making this group the largest. Postgraduates constitute 31.1%, indicating a notable proportion of respondents with advanced education. Only 4.1% have no formal education, while 1.6% completed up to the 10th grade and 7.4% up to the 12th grade. This distribution highlights that the sample is generally well-educated, with most participants having at least an undergraduate degree. Overall, the data indicates a high level of educational achievement among respondents.

4.HOW DO YOU KNOW ABOUT THE APP

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Social Media	17	14.3	14.3	14.3
	Advertisement	9	7.6	7.6	21.8
	YouTube	11	9.2	9.2	31.1
	Recommend by Friends or Family	82	68.9	68.9	100.0
	Total	119	100.0	100.0	

INTERPRTATION:

The table shows the sources through which respondents discovered the app, with a significant 68.9% stating they were referred by friends or family. Social media contributes to 14.3% of the responses, while advertisements account for 7.6%. YouTube is mentioned by 9.2% of respondents. This indicates that personal recommendations play a crucial role in increasing awareness of the app. Overall, the data emphasizes the value of social networks in promoting the app.

1. HOW OFTEN YOU USE CHALO APP:

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	More Frequently	19	16.0	16.0	16.0
	Frequently	37	31.1	31.1	47.1
	Rarely	37	31.1	31.1	78.2
	Often	26	21.8	21.8	100.0
	Total	119	100.0	100.0	

INTERPRETATION:

The table outlines how often respondents use the Chalo app. Notably, 31.1% use the app frequently, while another 31.1% say they use it rarely. Additionally, 21.8% of users report using the app often, and 16.0% use it more frequently. This indicates that, although some users engage with the app on a regular basis, a considerable number use it less often. Overall, the data reflects diverse usage patterns among respondents.

6.USE OF OTHER TRACKING APP:

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	NMMT	3	2.5	2.5	2.5
	My Bus	10	8.4	8.4	10.9
	Moovit	6	5.0	5.0	16.0
	Chalo	49	41.2	41.2	57.1
	Google Maps	50	42.0	42.0	99.2
	Other	1	.8	.8	100.0
	Total	119	100.0	100.0	

INTREPRETATION:

The table illustrates the usage of different tracking apps among respondents. Google Maps is the most popular, with 42.0%, closely followed by Chalo at 41.2%. My Bus represents 8.4%, while Moovit accounts for 5.0%, and NMMT has 2.5%. Additionally, 0.8% of users reported using other apps. This data suggests a strong preference for Google Maps and Chalo, indicating their prominence in tracking services.

7.FEATURS NEEDED TO BE UPDATED:

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid		1	.8	.8	.8
	Accurate location of bus	15	12.6	12.6	13.4
	Accurate location of bus, Accurate timing	11	9.2	9.2	22.7

	of bus				
	Accurate location of bus, Accurate timing of bus, Display the bus in surrounding	9	7.6	7.6	30.3
	Accurate location of bus, Display the bus in surrounding	3	2.5	2.5	32.8
	Accurate timing of bus	25	21.0	21.0	53.8
	Accurate timing of bus, Display the bus in surrounding	3	2.5	2.5	56.3
	Display the bus in surrounding	12	10.1	10.1	66.4
	i dont use it	1	.8	.8	67.2
	Network connection	10	8.4	8.4	75.6
	Network connection, Accurate location of bus	3	2.5	2.5	78.2
	Network connection, Accurate location of bus, Accurate timing of bus	3	2.5	2.5	80.7
	Network connection, Accurate location of bus, Accurate timing of bus, Display the bus in surrounding	18	15.1	15.1	95.8
	Network connection, Accurate location of bus, Display the bus in surrounding	3	2.5	2.5	98.3
	Network connection, Accurate timing of bus	1	.8	.8	99.2
	Network connection, Display the bus in surrounding	1	.8	.8	100.0
	Total	119	100.0	100.0	

INTERPRETATION:

The table outlines the features that respondents feel should be improved in the app. The primary concern is accurate bus timing, mentioned by 21.0% of users. Accurate bus location is also highlighted as important, with 12.6% of respondents noting it. Additionally, there are various requests for better display of buses in the surroundings and enhanced network connectivity, reflecting a range of preferences for upgrades. Overall, the data indicates that users prioritize improvements in timing and location accuracy to enhance their experience.

8. RATING SECURITY AND PRIVACY :

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Agree	13	10.9	11.0	11.0
	Agree	21	17.6	17.8	28.8
	Neutral	49	41.2	41.5	70.3
	Disagree	35	29.4	29.7	100.0
	Total	118	99.2	100.0	
Missing	System	1	.8		
Total		119	100.0		

INTERPRETATION:

The table summarizes respondents' evaluations of the app's security and privacy. Only 10.9% strongly agree that the app is secure, while 17.6% agree. A notable 41.2% are neutral, suggesting uncertainty or indifference. Additionally, 29.4% disagree with the app's security claims. With 118 valid responses and 1 missing, the data indicates varied opinions on the app's security, with many users showing either neutrality or doubt.

9. PREFARABLE FEATURES:

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Accurate time of bus	10	8.4	8.4	8.4
	Accurate time of bus, Location of bus	5	4.2	4.2	12.6
	Accurate time of bus, Location of bus, Route and direction	4	3.4	3.4	16.0
	Accurate time of bus, Location of bus, Show all the bus available, Route and direction	2	1.7	1.7	17.6
	Accurate time of bus, Location of bus,	2	1.7	1.7	19.3

	Strong network connection				
	Accurate time of bus, Location of bus, Strong network connection, Show all the bus available, Route and direction	12	10.1	10.1	29.4
	Accurate time of bus, Show all the bus available, Route and direction	1	.8	.8	30.3
	Accurate time of bus, Strong network connection, Show all the bus available	1	.8	.8	31.1
	Accurate time of bus, Strong network connection, Show all the bus available, Route and direction	4	3.4	3.4	34.5
	i dont use it	1	.8	.8	35.3
	Location of bus	18	15.1	15.1	50.4
	Location of bus, Route and direction	2	1.7	1.7	52.1
	Location of bus, Show all the bus available	2	1.7	1.7	53.8
	Location of bus, Show all the bus available, Route and direction	1	.8	.8	54.6
	Location of bus, Strong network connection	4	3.4	3.4	58.0
	Location of bus, Strong network connection, Show all the bus available	2	1.7	1.7	59.7
	Location of bus, Strong network connection, Show all the bus available, Route and direction	2	1.7	1.7	61.3
	Route and direction	16	13.4	13.4	74.8
	Show all the bus available	14	11.8	11.8	86.6
	Show all the bus available, Route and direction	10	8.4	8.4	95.0
	Strong network connection	4	3.4	3.4	98.3
	Strong network connection, Show all the bus available	2	1.7	1.7	100.0
	Total	119	100.0	100.0	

INTERPRETATION:

The table details the features that respondents prefer in the app. The top request is for accurate bus timing, highlighted by 8.4% of users. The location of the bus is also important, noted by 15.1%, and frequently mentioned alongside features like route and direction. There is a strong interest in having a dependable network connection and the option to view all available buses, with various combinations of features being favored. Overall, the data indicates a clear emphasis on accuracy in bus timing and location, along with improved routing information and connectivity

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10. COMPARING CHALO APP WITH OTHER TRACKING APP:

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Agree	15	12.6	12.6	12.6
	Agree	24	20.2	20.2	32.8
	Neutral	47	39.5	39.5	72.3
	Disagree	33	27.7	27.7	100.0
	Total	119	100.0	100.0	

INTERPRETATION:

The table reflects respondents' views on Chalo's service in comparison to others. Just 12.6% strongly agree that Chalo provides superior service, while 20.2% agree. A considerable 39.5% remain neutral, indicating uncertainty or indifference. Additionally, 27.7% disagree with the idea that Chalo excels in service. Overall, the data reveals mixed opinions about Chalo's performance compared to competitors, with a significant number of respondents expressing neutrality or doubt.

11. SATISFACTION OF CHALO APP WITH NETWORK NCONNECTON:

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Agree	4	3.4	3.4	3.4
	Agree	27	22.7	22.7	26.1
	Neutral	53	44.5	44.5	70.6
	Disagree	35	29.4	29.4	100.0
	Total	119	100.0	100.0	

INTERPRETATION:

The table illustrates respondents' satisfaction with the Chalo app's network connection. Just 3.4% strongly agree they are satisfied, and 22.7% agree. A significant 44.5% remain neutral, suggesting uncertainty about their satisfaction levels. Meanwhile, 29.4% express disagreement with the idea of being satisfied. Overall, the data indicates varied opinions on the network connection, with many users showing neutrality or dissatisfaction.

12. WOULD YOUU RECOMMAND CHALI TO OTHERS

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	71	59.7	59.7	59.7
	No	8	6.7	6.7	66.4
	Maybe	36	30.3	30.3	96.6
	4	4	3.4	3.4	100.0
	Total	119	100.0	100.0	

INTERPRETATION:

The table shows survey results about recommending chalo.. Most respondents (59.7%) expressed a willingness to recommend it, while a small percentage (6.7%) would not. Meanwhile, 30.3% were undecided, selecting "Maybe." A minimal 3.4% did not offer a clear response. In general, the findings suggest that the majority of respondents have a favorable view of Chalo.

13.HELPFULLNESS OF CHALO IN DAILY ROUTINE:

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Agree	28	23.5	23.5	23.5
	Agree	41	34.5	34.5	58.0
	Neutral	49	41.2	41.2	99.2
	Disagree	1	.8	.8	100.0
	Total	119	100.0	100.0	

INTERPRETATION:

The table summarizes survey responses on how helpful Chalo is in daily routines. About 58% of participants expressed either strong agreement or agreement about its usefulness. Meanwhile, 41.2% were neutral, indicating they were uncertain about its effectiveness. Only one respondent (0.8%) disagreed, reflecting limited negative feedback. Overall, the results suggest a largely favorable view of Chalo's role in daily activities.

Chi-Square Test

Frequencies

Gender

	Observed N	Expected N	Residual
Male	60	59.5	.5
Female	59	59.5	-.5
Total	119		

How Often You Use Chalo App

	Observed N	Expected N	Residual
More Frequently	19	29.8	-10.7
Frequently	37	29.8	7.3
Rarely	37	29.8	7.3
Often	26	29.8	-3.7
Total	119		

Test Statistics

	Gender	How Often You Use Chalo App
Chi-Square	.008[a]	7.891[b]
df	1	3
Asymp. Sig.	.927	.048

a. 0 cells (0.0%) have expected frequencies less than 5. The minimum expected cell frequency is 59.5.
b. 0 cells (0.0%) have expected frequencies less than 5. The minimum expected cell frequency is 29.8.

INTERPRETATION:

In the gender distribution, the observed counts for males (60) and females (59) closely match the expected values (59.5 each), resulting in minimal residuals, indicating no significant difference in gender representation.

For the usage of the Chalo app, observed frequencies vary significantly from expected values, particularly for "More Frequently," which shows a notable negative residual (-10.7), suggesting fewer users than anticipated. In contrast, categories "Frequently" and "Rarely" exceed expectations, highlighting a preference for these usage levels. Overall, the discrepancies in app usage indicate a departure from the expected distribution, warranting further investigation.

Regression

Variables Entered/Removed[a]

Model	Variables Entered	Variables Removed	Method
1	Rating Security and Privacy[b]	.	Enter

a. Dependent Variable: Service of chalo comparing to others
b. All requested variables entered.

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.508[a]	.258	.252	.851

a. Predictors: (Constant), Rating Security and Privacy

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	29.227	1	29.227	40.344	.000[b]
	Residual	84.036	116	.724		
	Total	113.263	117			

a. Dependent Variable: Service of chalo comparing to others
b. Predictors: (Constant), Rating Security and Privacy

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	1.306	.251		5.197	.000
	Rating Security and Privacy	.523	.082	.508	6.352	.000

a. Dependent Variable: Service of chalo comparing to others

INTERPRETATION:

The ANOVA table reveals a significant connection between the predictor "Rating Security and Privacy" and the outcome "Service of Chalo compared to others." The regression sum of squares (29.227) is substantially greater than the residual sum (84.036), leading to a high F-value of 40.344 and a p-value of .000, well below the 0.05 threshold. This indicates that differences in security and privacy ratings notably account for the variations in perceptions of Chalo's service. Therefore, it's clear that these ratings play a crucial role in influencing service comparisons.

regression:

Variables Entered/Removed[a]

Model	Variables Entered	Variables Removed	Method
1	Satisfaction of Network Connection with Chalo App[b]	.	Enter

a. Dependent Variable: Service of chalo comparing to others

b. All requested variables entered.

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.702[a]	.493	.489	.701

a. Predictors: (Constant), Satisfaction of Network Connection with Chalo App

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	55.846	1	55.846	113.738	.000[b]
	Residual	57.448	117	.491		
	Total	113.294	118			

a. Dependent Variable: Service of chalo comparing to others

b. Predictors: (Constant), Satisfaction of Network Connection with Chalo App

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	.285	.247		1.156	.250
	Satisfaction of Network Connection with Chalo App	.846	.079	.702	10.665	.000

a. Dependent Variable: Service of chalo comparing to others

INTERPRETATION:

The regression analysis shows that "Satisfaction of Network Connection with Chalo App" is a significant predictor of how users perceive the service compared to others. The model has an R value of 0.702, indicating a strong correlation, and an R^2 value of 0.493, meaning that approximately 49.3% of the variance in service perceptions can be explained by satisfaction with network connection.

The ANOVA results confirm this significance, with an F-value of 113.738 and a p-value of .000, indicating a highly significant relationship. The coefficients table reveals that the unstandardized coefficient for satisfaction is 0.846, suggesting that for every one-unit increase in satisfaction, the perception of service increases by 0.846 units. The standardized coefficient (Beta) of 0.702 further confirms a strong effect, and the t-value of 10.665 with a p-value of .000 highlights the statistical significance of this predictor.

MODE

Statistics

		Acurate Time of Bus	Location of Bus	Strong Network Connection	Show All Bus Available	Route And Direction
N	Valid	119	119	119	119	119
	Missing	0	0	0	0	0
Mode		0	0	0	0	0

Frequency Table

Acurate Time of Bus

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	NO	77	64.7	64.7	64.7
	Yes	42	35.3	35.3	100.0

	Total	119	100.0	100.0	

Location of Bus

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	NO	63	52.9	52.9	52.9
	Yes	56	47.1	47.1	100.0
	Total	119	100.0	100.0	

Strong Network Connection

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	NO	86	72.3	72.3	72.3
	Yes	33	27.7	27.7	100.0
	Total	119	100.0	100.0	

Show All Bus Available

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	NO	67	56.3	56.3	56.3
	Yes	52	43.7	43.7	100.0
	Total	119	100.0	100.0	

Route And Direction

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	NO	66	55.5	55.5	55.5
	Yes	52	43.7	43.7	99.2
	5	1	.8	.8	100.0
	Total	119	100.0	100.0	

INTERPRETATION:

The mode for all variables is 0, indicating that the most frequent response across categories is "No." Notably, a significant number of respondents expressed dissatisfaction with the "Accurate Time of Bus" (64.7% answered No) and a "Strong Network Connection" (72.3% answered No). Regarding the "Location of Bus" and "Route and Direction," 52.9% and 55.5% of participants, respectively, also reported dissatisfaction. While a majority (56.3%) indicated they cannot "Show All Bus Available," many users still see a need for improvements in these areas. Overall, the findings reveal widespread dissatisfaction with the surveyed service aspects.

RESULT :

The study analysis the user satisfaction towards the chalo application . This study measure the user satisfaction by performing the rgerssion between the network connection and the rating of the service from the result from thre spss tool it is analysed that the network connection and rating of the service is interconnected. The second test is a regression test that analysis the relationship between the security and privacy with the rating of the service. The test resut says the there is a relationship between the them .

The next test is to carry out a chi-square with the gender and the frequency of use of chalo app the spss test says that the frequency and the gender does not have any association between them.

Conclusion :

The conclusion of the study on the user satisfaction towards the chalo app provide the inshigt of the need of the improvement of the individual features such aa network connection , security , privacy , ticket booking and other features have a great effect on the rating of the app. This suggest that the chalo app needed to keep on update these features . the gender has no association with thw frequency. The app needs more exposure an d branding in the public transport user .

REFERENCES:

List all the material used from various sources for making this project proposal

Research Papers:

1. **Mobile App for Public Transport: A Usability and User Experience Pers pective (Anaïs Luisa Habermann):**

The fast progress of smart devices and applications in the mobility sector open up a huge potential for mobility services that allow for an individualization of mobility patterns. In combination with an increasing infrastructure of public transport and diverse means of transportation, novel mobility concepts represent a promising solution to societal changes and mobility needs. However, the increasing functionality and multitude of options

add to the complexity of using those services. The research is embedded into an interdisciplinary project – Mobility Broker – in which the central platform for planning and booking a journey using different public means of transport is developed. Different from other approaches, users are integrated in all stages of technical development. The paper reports on an empirical study in which the usability of the first prototype of the smart phone application was tested. Findings show that interface design and visual ergonomics are quite mature at this stage. Implications of findings are discussed and future research lines are explicated.

2. Evaluation framework for mobile ticketing applications in public transit: (Hong Yang, 2018)

Both in the US and abroad, various transit agencies have started to implement mobile ticketing applications, which save commuters time during ticket purchase and allows them to avoid surcharges typically incurred when purchasing tickets onboard. Mobile ticketing applications also have a high potential to help transit agencies reduce costs, give them a better understanding of commuter behaviour, and allow them to make their services more efficient. However, it is not a straightforward task to predict the customers' reaction and gain their trust and to increase the adoption rate of this relatively new technology. A comprehensive evaluation plan is required to detect and fix critical usability problems during both the application development and system wide implementation phases. To address this need, a four-stage evaluation framework is proposed in this study for mobile ticketing technologies in public transit to improve their usability and enhance their adoptability by the potential users. The proposed evaluation framework was employed when New Jersey transit's mobile ticketing application, MyTix, introduced in 2013, was being developed.

3. Urban Transport in India: Issues, Challenges, and the Way Forward:

Cities in India are crucial for economic growth, generating over two-thirds of national income despite housing less than one-third of the population. As urbanization increases, the efficiency of urban transport systems becomes essential for sustaining economic momentum. Ineffective transport hampers growth, leading to reduced competitiveness in both domestic and international markets. Although Indian cities have lower vehicle ownership than developed countries, they face severe congestion, delays, pollution, and accidents. This paper examines key urban transport issues, focusing on vehicular growth trends and transport infrastructure challenges. It highlights problems such as congestion, pollution, and road safety, and proposes targeted policy measures to enhance urban transportation efficiency in India.

4. Real time bus tracking system using mobile technology:

This Real-time Bus Tracking System Using Mobile Technology proposes the development of a bus tracking and ticket booking system that allows passengers to track the live location of buses in real time, calculate ticket fares base distance and book tickets online. The project will require the integration of live GPS data from the buses, a real-time tracking system, a fare calculation algorithm, and a ticket booking system. The tracking system will use mapping tools such as Google Maps API to display the live location of the buses, while the fare calculation algorithm will take into account the distance between the passenger pickup and drop-off points to calculate the fare. The ticket booking system will allow passengers to book tickets online and receive a booking confirmation and unique ticket ID. The project will require knowledge of programming languages such as Python, JavaScript, and HTML/CSS, as well as experience working with APIs, web development, and databases. Additional features such as user accounts, payment integration, or a mobile application can also be added based on specific requirements. The system real-time tracking feature allows passengers to track the live location of buses, obtain estimated arrival times, and plan their travel accordingly. This feature provides passengers with accurate information about bus locations, which helps them avoid waiting for long periods at bus stops. Additionally, the fare calculation feature enables passengers to calculate ticket fares based on the distance travelled, eliminating the need for manual fare calculation and reducing the chances of errors. This feature also eliminates the need for passengers to queue up at ticket counters, thereby reducing the overall waiting time and congestion at bus stations Overall, the proposed system provides a comprehensive solution to the common problem s faced by passengers during their commute, such as uncertainty about bus arrival times, long waiting periods and difficulties in purchasing tickets.

5. Travel time prediction of urban public transportation based on detection of single routes:

Improving travel time prediction for public transit effectively enhances service reliability, optimizes travel structure, and alleviates traffic problems. Its greater time-variance and uncertainty make predictions for short travel times (35min) more subject to be influenced by random factors. It requires higher precision and is more complicated than long-term predictions. Effectively extracting and mining real-time, accurate, reliable, and low-cost multisource data such as GPS, AFC, and IC can provide data support for travel time prediction. Kalman filter model has high accuracy in one-step prediction and can be used to calculate a large amount of data. This paper adopts the Kalman filter as a travel time prediction model for a single bus based on single-line detection: including the travel time prediction model of route (RTM) and the stop dwell time prediction model (DTM); the evaluation criteria and indexes of the models are given. The error analysis of the prediction results is carried out based on AVL data by case study. Results show that under the precondition of multi-source data, the public transportation prediction model can meet the accuracy requirement for travel time prediction and the prediction effect of the whole route is superior to that of the route segment between stops.