# CarKoto: An AI-Powered Platform for Transparent and Precise Used Car Price Prediction in Bangladesh


1st Raiyan Rafsan
*Dept.of ECE*
*North South University*
Dhaka, Bangladesh
raiyan.rafsan@northsouth.edu

2nd Maher Ali Rusho*
*Dept. of Lockheed Martin Engineering Management*
*University of Colorado, Boulder*
Boulder, Colorado
maher.rusho@colorado.edu

3rd Jarif Ahsan
*Dept.of ECE*
*North South University*
Dhaka, Bangladesh
jarif.ahsan02@northsouth.edu

4th Rahimul Haque Afrad
*Dept.of ECE*
*North South University*
Dhaka, Bangladesh
rahimul.afrad@northsouth.edu

5th Ahmed Faizul Haque Dhrubo
*Dept.of ECE*
*North South University*
Dhaka, Bangladesh
ahmed.dhrubo@northsouth.edu

6th Md. Khurshid Jahan
*Dept.of ECE*
*North South University*
Dhaka, Bangladesh
khurshid.jahan@northsouth.edu

7th Mohammad Abdul Qayum
*Dept.of ECE*
*North South University*
Dhaka, Bangladesh
mohammad.qayum@northsouth.edu



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***Abstract*—In the evolving landscape of the Bangladeshi automotive market, acquiring new vehicles remains a formidable challenge due to economic constraints and infrastructural limitations. This paper delineates the development of an AI-driven, dual-component platform designed to revolutionize the used vehicle market through precise price predictions and enhanced transaction transparency. The platform's unique ability to address critical market inefficiencies, such as overpricing and fraudulent practices, is a key feature. Utilizing an extensive dataset encompassing variables such as car name, model, year, brand, registration, engine capacity, and type, the platform employs advanced machine learning algorithms, particularly the XGBoost model, to deliver highly accurate price estimations. The platform offers a comprehensive, user-centric service that mitigates these risks. The platform's adaptive capabilities, including inflation-adjustable parameters, maintain relevance in fluctuating economic conditions. Comparative analyses underscore the superiority of our model over competing AI technologies, establishing a new paradigm for digital marketplace innovations. The potential societal impacts, from economic activity stimulation to environmental sustainability, highlight the transformative power of integrating machine learning with digital platforms. This study not only showcases the practical applications of AI in addressing real-world challenges but also sets a precedent for future technological deployments across various sectors.**



***Index Terms*—Machine Learning, Price Prediction, Used Cars, XGBoost, Market Transparency, Data Preprocessing, AI Models.**


## I. Introduction

Acquiring a brand-new car in Bangladesh poses a significant challenge for most people. The high population density exacerbates traffic congestion, largely due to the over- There is an overwhelming number of private vehicles on the roads. Consequently, the government has imposed higher taxes on brand– new and reconditioned vehicles, making them unaffordable for many. As a result, there has been a noticeable shift towards buying used cars in Bangladesh. However, the increasing demand for used cars has driven their prices, and some used car dealers exploit this by charging exorbitant prices.

We propose an innovative approach using artificial intelligence to predict the price of used cars based on their features. This will enable the public to assess car prices more accurately before making a purchase, thereby reducing the risk of being scammed in the used car market. The Bangladesh Used Car Price Prediction and Buy and Sell The platform is a pioneering and user-centric online service that leverages the power of machine learning to provide precise price predictions for pre-owned vehicles in the Bangladeshi market.

This platform serves as a valuable resource for individuals looking to buy or sell used cars and showcases the integration of advanced technology into the automotive industry. In Bangladesh, the used car market is dynamic and diverse, encompassing a wide range of makes, models, and conditions. Pricing used cars can be challenging due to factors such as age, mileage, condition, and market trends. Our platform addresses these challenges by harnessing the capabilities of machine learning to deliver reliable and data-driven price estimates, making the buying and selling process more transparent and

efficient.

## II. Literature Review

Sameerchand Pudaruth [1] proposed predicting the Price of Used Cars using Machine Learning Techniques. They collected the historical data of used cars in Mauritius from the newspapers and applied different machine learning techniques like decision trees, K-nearest neighbors, Multiple Linear Regression, and Naïve Bayes algorithms to predict the price. Nitis Monburinon et al. [2] proposed predicting Prices for Used Cars Using Regression Models. The authors selected the data from the German e-commerce site. The main goal of this work is to find a suitable predictive model to predict the price of used cars. They used different machine learning techniques for comparison and used the mean absolute error(MAE) as the metric. Their model with gradient-boosted regression has a lower error with an MAE value of 0.28, and this gives a higher performance where linear regression has an MAE value of 0.55 and random forest with an MAE value of 0.35.

Enis Gegic et al. [3] proposed Car Price Prediction using Machine Learning Techniques. They proposed an ensemble model by collecting different machine learning techniques like Support Vector Machine, Random Forest, and Artificial neural network. They collected the data from the web portal www.autopijaca.ba and built this model to predict used car prices in Herzegovina and Bosnia.

Kanwal Noor and Sadaqat Jan [4] proposed a Vehicles Price Prediction System using Machine Learning Techniques. In this paper, they proposed a model to predict the price of the cars through multiple linear regression methods. They selected the most influencing feature and removed the rest using the feature selection technique. The Proposed model achieved a prediction precision of about 98

K Samruddhi and R Ashok Kumar [5] proposed a model that uses the K closest neighbor approach to predict the pricing of second-hand cars, which is suitable for small data sets. They compiled and evaluated a dataset of used cars. They used various ratios of test and training data to assess the model's accuracy after it had been trained on the data. The K-fold approach, which is straightforward to understand, was used to cross-validate the same model to assess the model's Performance.

Anamika Das Mou et al. [6] Firstly, they have simplified, e.g., assuming a numeric value for the data (Expensive as 3, Affordable as 2, Normal as 1, etc.). They applied the four supervised learning algorithms, i.e., SVM, KNN, Random Forest, and Naive Bayes, to their dataset and selected one algorithm that gave the best results.

Sifat Momen et al. [7] present a research paper on Bangladesh Used Car Price Prediction, and they have used different machine learning algorithms like Linear Regression, Lasso Regression, Decision tree, Random Forest, and XGBoost.Their XGBoost model has an accuracy of 91.3%, which is a fairly good score.

## III. Background Study

In Bangladesh, the annual vehicle purchase by many individuals is primarily from local sellers, leading to arbitrary pricing. This practice, where sellers set car prices at their discretion, often leaves consumers in the dark about the actual prices of new or second-hand cars. The search for a preferred model in the desired color can be a prolonged and challenging process, often requiring travel to multiple locations under uncomfortable weather conditions, further complicating the purchasing process.

Consequently, many consumers turn to online platforms to purchase vehicles [8]–[10]. However, this solution comes with risks, as not all online platforms are trustworthy. These platforms sometimes fail to provide comprehensive information about the vehicles, exposing consumers to potential risks and misinformation. The prevalence of scams further complicates this issue, with e-commerce platforms and MLM businesses reportedly defrauding approximately Tk 21,000 crore between 2006 and 2021. These scams have evolved, expanding and victimizing newer generations of consumers [11].

It is important to note that blaming victims for poor financial decisions is insufficient. Financial fraud in Bangladesh has far-reaching effects, impacting more than just individual victims. The effects of such fraud are extensive, and the older generation's unfamiliarity with new technologies exacerbates this issue. They often fail to conduct adequate research about vehicle pricing, taxes, and warranty terms associated with their purchases, making them more susceptible to scams. This lack of information further hinders their ability to make informed decisions in the digital marketplace, highlighting the need for more accessible and reliable information.

Purchasing a brand-new car in Bangladesh is nearly impossible for most people. The country is densely populated and faces severe traffic congestion due to the large number of private vehicles. Consequently, the government has imposed higher taxes on brand-new and reconditioned vehicles, making them unaffordable for many. This has led to an increasing shift towards purchasing used cars. However, as the demand for used cars rises, so do their prices. Moreover, some individuals involved in the used car selling business demand higher prices than previous rates.

We propose using artificial intelligence to predict car prices based on their features. This approach will make it easier for the public to investigate car prices before purchasing, reducing the risk of being scammed in the fake used car market. The Bangladesh Used Car Price Prediction and Buy and Sell Platform is an innovative and user-centric online service that leverages machine learning to provide accurate price predictions for pre-owned vehicles in the Bangladeshi market. This platform ensures the accuracy of its data by sourcing information from reliable sources such as car dealerships, auction houses, and online marketplaces. By harnessing the capabilities of machine learning, this platform delivers reliable and data-driven price estimates, making the buying and selling process more transparent and efficient.

## IV. Methodology

### A. Data Collection & Analysis

Dataset collection posed a significant challenge due to our limited expertise in web scraping. However, we quickly adapted and began by manually collecting approximately 800 data points from various Facebook pages that facilitate the sale of used cars and from Bikroy.com [12]. As our project progressed, we demonstrated our resourcefulness by enhancing our web scraping skills through instructional videos on

TABLE I
Specifications and Pricing of Various Car Models

| Car Name | Brand | Car Model | Registration | Model Year | Transmission | Body Type | Fuel Type | Engine Capacity | Kilometers Run | Price |
|---|---|---|---|---|---|---|---|---|---|---|
| Toyota Vitz | Toyota | Vitz | 2016 | 2012 | Automatic | HatchBack | Octane | 1300 | 45000 | 1392000.0 |
| Toyota Hiace | Toyota | Hiace Ambulance | 2017 | 2015 | Automatic | MPV | Petrol | 1500 | 60000 | 1125200.0 |
| Toyota Hiace | Toyota | Hiace GL | 2018 | 2018 | Automatic | MPV | Petrol, Octane | 2000 | 46810 | 2668000.0 |
| Toyota Hiace | Toyota | Hiace | 2018 | 2016 | Automatic | MPV | Octane | 2000 | 45557 | 3306000.0 |
| Toyota Prius | Toyota | Prius S | 2018 | 2016 | Automatic | Saloon | Hybrid | 1800 | 21065 | 2898840.0 |
| Honda Vezel | Honda | Vezel RS | 2016 | 2016 | Automatic | Estate | Octane | 1500 | 52314 | 2375000.0 |
| Toyota Axio | Toyota | Axio G | 2017 | 2013 | Automatic | Saloon | CNG, Octane | 1500 | 45300 | 1676200 |

YouTube, which enabled us to gather data from websites that legally share their information.

Despite time constraints, we have meticulously accumulated 1800 data points thus far. The data preprocessing was conducted in Jupyter Notebook, where we painstakingly examined the relationships among different features and identified which were most pertinent to our study. These crucial features underwent thorough preprocessing, including the meticulous conversion of categorical values into numerical ones.

Significant features were identified based on their correlation with the car price and their relevance to the market dynamics in Bangladesh. These features, such as brand, model year, and engine capacity, play a crucial role in determining the price of a used car. They were then subjected to further preprocessing to convert categorical data into numerical formats suitable for machine learning algorithms. Techniques such as one-hot encoding were used for nominal data, while ordinal data were handled through label encoding.

We collected the dataset from Bikroy.com [12], the BEG AUTOS Facebook page [13], and the CarHub Facebook page [14], as well as manually, ensuring no redundancy. The registered vehicles span from 1990 to 2023, capturing recent vehicle details. For dataset validation, we cross-checked with various used car dealerships, comparing our data with their records to ensure accuracy and completeness. Any discrepancies were resolved through further investigation and validation.

This dataset of table I includes car name, brand, registration year, model year, transmission, body type, fuel type, engine capacity, kilometers run, and price. Saloon automobiles are the most prevalent body type, followed by MPV and SUV/4x4, reflecting their popularity in Bangladesh, whereas hatchbacks and estates have lower sales. Regarding fuel type, CNG and oil-powered vehicles are the most common, followed by hybrids and LPG. The transmission analysis shows a preference for automatic cars over manual ones in Bangladesh.

Box-plot analysis reveals that automatic cars have higher average prices than manual cars, SUVs and MPVs have higher average prices than saloons and other body types, and oil-driven and hybrid cars have higher average selling prices than CNG and LPG vehicles. In manual transmission cars, registration year correlates with price but has gaps due to the limited import of manual cars. In contrast, automatic transmission cars show a linear increase in price with registration year, reflecting lower mileage and higher prices for newer registrations.


Fig. 1. Data Refinement and Outlier Removal.

We identified data inconsistencies in cars registered before 1990 and removed these entries. Additionally, we set price ranges to avoid inconsistencies for saloons (more than 75 lacs) and SUVs (more than 140 lacs). These inconsistencies, such as unrealistic registration years and prices, could have skewed our analysis and predictions. After removing outliers and addressing these inconsistencies, we obtained a more consistent dataset for analysis.

### B. System Design

The system design of our project is meticulously structured to ensure efficient data collection, preprocessing, model training, evaluation, and deployment. The data collection process, a crucial foundation for our project, was meticulously designed. It was bifurcated into two primary methods: web scraping and manual collection. We meticulously sourced data from various sources using web scraping techniques. Additionally, we manually gathered data points from dealerships and Facebook pages. This approach ensured a diverse and comprehensive dataset, setting a strong foundation for our project.

Data cleaning was then performed to remove inconsistencies and inaccuracies, ensuring the integrity and quality of the dataset, which is crucial for the subsequent stages. In the preprocessing phase, significant features were identified based on their correlation with car prices and relevance to the market dynamics in Bangladesh. These features underwent further preprocessing, including converting categorical values into numerical formats using one-hot and label encoding techniques. The cleaned and preprocessed dataset was then divided into training and test sets, with an 80-20 split. This split was chosen to ensure a balance between training the model on a sufficiently large dataset and testing its performance on a representative portion of the data, thereby facilitating model evaluation.

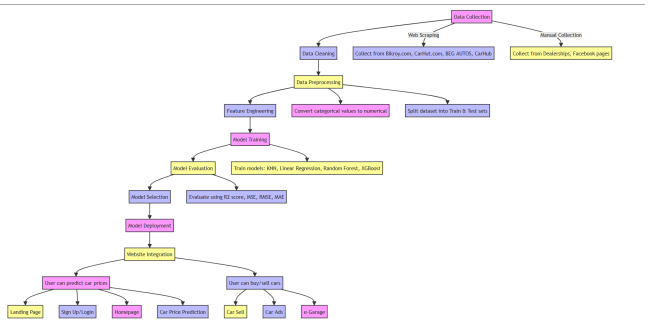


Fig. 2. System Architecture.

We meticulously trained various machine learning models using the preprocessed data, including K-Nearest Neighbors (KNN), Linear Regression, Random Forest, and XGBoost. The trained models were rigorously evaluated using several performance metrics to determine their accuracy and reliability. This thorough evaluation process, which included R2 Score, Mean Squared Error (MSE), Root Mean Squared Error (RMSE), and Mean Absolute Error (MAE), led us to select the best-performing model, XGBoost for its highest R2 score and overall superior performance. This careful selection process ensures the reliability of our system. The selected model was then deployed on the website, integrating the machine-learning capabilities into the platform. This enables users to predict car prices based on the model's output. In the final phase, we integrated the model into the website and facilitated user interaction through comprehensive functionalities. These include the ability for users to sign up or log in to access the platform, use the central dashboard (homepage) to navigate, input car details to receive a predicted price, list their cars for sale, browse all listed cars in the Car Ads section, and access additional car-related services through the e-Garage feature. These functionalities provide a comprehensive overview of the platform's capabilities, enhancing the user experience.

## V. Results and Analysis

Our study systematically applied several machine learning models to predict used car prices, employing a dataset consisting of 1,800 records processed and analyzed using Jupyter Notebook. The models tested include linear regression, Random Forest, K-nearest neighbors (KNN), and Extreme Gradient Boosting (XGBoost).

### A. Model Performance Evaluation

We meticulously employed the Grid-Search-CV technique for model validation, leaving no stone unturned to determine the best-performing model for our used car price prediction platform. We evaluated four machine learning models: Linear Regression, Random Forest, K-nearest neighbors (KNN) Regression, and XGBoost regression. The performance of these models was rigorously assessed using various metrics, including R2 Score, Log Mean Squared Error, Log Root Mean Squared Error, and Log Mean Absolute Error.

TABLE II
Model Execution and Results

| Model | R2 Score | Log Mean Squared | Log Root Mean Squared | Log Mean Absolute |
|---|---|---|---|---|
| Linear Regression | 63.89 | 27.88 | 13.93 | 12.84 |
| Random Forest | 91.92 | 26.32 | 13.14 | 11.45 |
| XGBoost | 93.37 | 26.14 | 13.06 | 11.67 |
| KNN Regression | 60.05 | 28.01 | 13.99 | 12.85 |

The table II unequivocally shows that the XGBoost model reigns supreme, outperforming the other models with an R2 score of 93.37%. This score is a testament to its unparalleled ability to predict used car prices accurately. The Random Forest model also performed well, achieving an R2 score of 91.92%. In contrast, the Linear Regression and KNN Regression models showed significantly lower R2 scores of 63.89% and 60.05%, respectively, indicating their inferior predictive accuracy. The evaluation metrics further validate the XGBoost model as the best fit for our project. The XGBoost model not only exhibited the lowest Log Mean Squared Error (26.14) and Log Root Mean Squared Error (13.06) but also a competitive Log Mean Absolute Error (11.67). These results underscore its robustness and precision in predicting car prices, making it the most reliable model for our platform.

After careful consideration, we have selected the XGBoost model for deployment in our platform. Its high R2 score and low error metrics make it the most reliable model for providing accurate and data-driven price estimates. We are confident that

this model will enhance the transparency and efficiency of the used car market in Bangladesh.

### *B. Comparative Analysis with Competing AI Technologies*

A comparative analysis with other AI technologies, such as Gemini [15] and Copilot [16], underscores the superiority of our XGBoost model. Unlike these services, which rely on crawling websites for a few data points, our model leverages a comprehensive dataset to offer more precise predictions. This precision is further enhanced by an inflation parameter adjustable according to the latest economic data, ensuring the model remains relevant under fluctuating economic conditions.

Table III below illustrates our model's capability to provide competitive and often more precise pricing than existing AI models, reflecting its practical utility in the marketplace.

TABLE III
AI COMPETITIVE PRICES WITH CARKOTO

| Car Details | Gemini | Copilot | CarKoto |
|---|---|---|---|
| Axio 2012, Reg 2016, 85000 km | 1,800,000 BDT | 1,600,000 BDT | 1,750,000 BDT |

The XGBoost model demonstrated high scalability and the ability to handle large datasets efficiently, which is critical for adapting to extensive market data. Its feature-important capability also helps identify key factors influencing car prices, facilitating more accurate predictions. Applying regularization techniques within XGBoost aids in avoiding overfitting, making it robust against outliers and noise—common issues in large datasets.

The results from our implementation confirm the effectiveness of XGBoost over other tested models and competing AI technologies, endorsing its suitability for deployment in a user-centric online platform for predicting used car prices. The table highlights the practical advantages of our model, showing its superior accuracy in estimating the market value of vehicles. Thus, it provides users with reliable and data-driven insights for their buying and selling decisions.

## VI. IMPACT AND IMPLICATIONS

Introducing an AI-powered platform for predicting used car prices brings transformative implications for various societal domains, enhancing individual and collective welfare. This technology significantly improves consumer convenience and accessibility, particularly for those with limited mobility or residing in remote areas. The platform empowers consumers by fostering market transparency and fair competition, providing detailed insights into car prices and seller reputations. This shift not only enhances consumer satisfaction but also elevates overall market standards, making consumers feel confident and in control of their purchasing decisions.

Regarding health and safety, the platform plays a crucial role in minimizing public exposure to roadside dust and vehicular emissions, critical contributors to respiratory conditions. This reduction in exposure, coupled with the platform's ability to reduce traffic congestion and the likelihood of road accidents, significantly enhances public safety. The rigorous verification processes for seller identities and vehicle listings further enhance consumer safety, ensuring that vehicles meet safety standards and reducing the risk of accidents due to vehicle malfunctions. Legally, the platform facilitates adherence to automotive sales regulations, ensuring secure and compliant transactions that protect buyers and sellers.

The platform's environmental and cultural impacts are equally significant. It plays a pivotal role in promoting sustainable practices by encouraging vehicle reuse, thus reducing the need for new car production, which in turn decreases manufacturing-related emissions and raw material consumption. Culturally, adopting digital transaction methods over traditional car-buying practices can foster a shift in consumer behavior, setting new norms for transparency and accountability in the automotive industry. This technological integration addresses immediate market needs and supports broader societal goals of sustainability and innovation, potentially revolutionizing the automotive market and giving hope for a more sustainable future.

Our project can contribute to environmental sustainability by promoting the sale and purchase of used vehicles, reducing the demand for new car production, and encouraging fuel efficiency and alternative fuel options. By extending the lifespan of cars and reducing resource consumption, such projects play a role in creating a more sustainable automotive industry. The results from our implementation confirm the effectiveness of XGBoost over other tested models and competing AI technologies, endorsing its suitability for deployment in a user-centric online platform for predicting used car prices. The platform addresses immediate market needs and supports broader societal goals of sustainability and innovation, potentially revolutionizing the automotive market.

## VII. LIMITATIONS AND FUTURE WORK

Despite the promising results of our AI-powered platform for predicting used car prices, several limitations must be addressed. The initial challenge lies in the data collection and processing phase, where gathering and integrating diverse data from various sources presents significant engineering difficulties. However, the potential of our platform to overcome these challenges and deliver accurate predictions is immense. Ensuring data quality and consistency through robust cleaning and normalization techniques is essential. Additionally, developing accurate machine learning models that can generalize well to new data and effectively interpret complex patterns requires careful algorithm selection, optimization, and mitigation of overfitting or underfitting issues.

Another limitation involves creating a user-friendly interface that balances usability, responsiveness, and aesthetics while supporting various devices and screen sizes. However, it's the continuous monitoring and updating of the model that is crucial to maintain its accuracy and relevance in response to changing market dynamics. This requires a systematic approach to model updates, incorporating user feedback, and adapting to new trends in the automotive market.

We envision transforming this platform into a startup by integrating more advanced AI models and introducing an auto-adjustment parameter that aligns vehicle prices with current market conditions in Bangladesh. Future enhancements will include incorporating deep learning capabilities to predict car prices based on images and improve the UI/UX interface to offer a seamless user experience. We also plan to enable user sign-up via Email or Facebook IDs, integrating authentication APIs to ensure secure access. Additionally, the e-Garage feature will allow users to purchase imported car machinery, thereby reducing hassle and providing a comprehensive service platform. We aim to create a robust, accurate, and user-friendly platform that offers valuable price predictions and supports sustainable automotive practices by addressing these limitations and pursuing future improvements.

## VIII. Conclusion

Our project introduces a unique dual-component platform that redefines the used vehicle market. It seamlessly integrates a user-friendly website with advanced machine learning algorithms, enabling precise price prediction. This innovative approach leverages a wide range of variables, including car name, model, year, brand, registration, engine capacity, type, and expected price, to ensure accurate estimates.

The platform is designed to empower buyers and sellers, giving them the tools they need to make informed decisions. By addressing critical market needs and fostering a transparent and fair marketplace, it mitigates the risks of overpricing and fraud, ensuring safer transactions. The machine learning model's predictive capabilities provide all transaction parties with reliable, timely information, enhancing overall market efficiency and instilling confidence in their decisions.

This project exemplifies the potent application of machine learning in solving practical issues and showcases the potential of digital platforms to transform traditional marketplaces. As the platform evolves, it aims to set a precedent for similar technological deployments in various sectors, driving significant societal impacts in economic activity, market fairness, and consumer satisfaction. This potential for positive change should inspire hope and excitement for the future. Ongoing development will enhance accuracy, user experience, and security features to ensure the platform remains an invaluable tool in the automotive industry.

Despite competition from platforms like Google Bard [15] and Bing Chat [16], which offer updated data and precise predictions, our platform strives to improve data quality and adapt to frequent price fluctuations due to inflation in Bangladesh. We aim to elevate our platform's accuracy and relevance by addressing these challenges.

In essence, this project demonstrates the transformative potential of integrating machine learning with digital platforms to tackle real-world challenges in the automotive market. By enhancing price transparency, fostering fair competition, and improving the buying and selling experience, the platform sets a new benchmark for innovation in the industry. As we refine and expand our platform, our commitment remains steadfast in delivering accurate, reliable, and user-centric solutions. This commitment to continuous improvement should reassure our audience and inspire optimism for the future of the platform.

## References


[1] "(PDF) Predicting the Price of Used Cars using Machine Learning Techniques," ResearchGate. https://www.researchgate.net/publication/319306871_Predicting_the_Price_of_Used_Cars_using_Machine_Learning_Techniques

[2] Nitis Monburinon, Prajak Chertchom, T. Kaewkiriya, Suwat Rungpheung, Sabir Buya, and Pitchayakit Boonpou, "Prediction of prices for used car by using regression models," 2018 5th International Conference on Business and Industrial Research (ICBIR), 2018. https://www.semanticscholar.org/paper/Prediction-of-prices-for-used-car-by-using-models-Monburinon-Chertchom/f29bef76d6dd88181105ef5dc3bab5f6c8c42f63

[3] E. Gegic, B. Isakovic, D. Keco, Z. Masetic, and J. Kevric, "Car Price Prediction using Machine Learning Techniques," TEM Journal, vol. 8, no. 1, pp. 113–118, 2019, doi: https://doi.org/10.18421/TEM81-16.

[4] K. Noor and S. Jan, "Vehicle Price Prediction System using Machine Learning Techniques," International Journal of Computer Applications, vol. 167, no. 9, pp. 27–31, Jun. 2017, doi: https://doi.org/10.5120/ijca2017914373.

[5] K. Samruddhi and R. Ashok Kumar, "Used Car Price Prediction using K-Nearest Neighbor Based Model," International Journal of Innovative Research in Applied Sciences and Engineering, vol. 4, no. 3, pp. 686–689, Sep. 2020, doi: https://doi.org/10.29027/ijirase.v4.i3.2020.686-689.

[6] A. Das Mou, P. K. Saha, S. A. Nisher, and A. Saha, "A Comprehensive Study of Machine Learning algorithms for Predicting Car Purchase Based on Customers Demands," 2021 International Conference on Information and Communication Technology for Sustainable Development (ICICT4SD), Feb. 2021, doi: https://doi.org/10.1109/icict4sd50815.2021.9396868.

[7] F. R. Amik, A. Lanard, A. Ismat, and S. Momen, "Application of Machine Learning Techniques to Predict the Price of Pre-Owned Cars in Bangladesh," Information, vol. 12, no. 12, p. 514, Dec. 2021, doi: https://doi.org/10.3390/info12120514.

[8] "Buy & Sell Vehicles in Bangladesh," Bikroy. https://bikroy.com/en/ads/bangladesh/vehicles (accessed Jul. 06, 2024).

[9] "Find the Best Car Price in Bangladesh at CarDekho.com.bd," www.cardekho.com.bd. https://www.cardekho.com.bd/google_vignette (accessed Jul. 06, 2024).

[10] "Buy and sell cars, motorbikes and trucks in Bangladesh - Garirbazar," www.garirbazar.com. https://www.garirbazar.com/ (accessed Jul. 06, 2024).

[11] K. M. Amin, "Why scams thrive in Bangladesh," The Daily Star, Aug. 31, 2023. https://www.thedailystar.net/opinion/views/news/why-scams-thrive-bangladesh-3407316

[12] "Bikroy - Electronics, Cars, Property and Jobs in Bangladesh," Bikroy. http://bikroy.com/ (accessed Aug. 02, 2024).

[13] "Log in or sign up to view," www.facebook.com. https://www.facebook.com/Begautos/ (accessed Aug. 02, 2024).

[14] "Log in or sign up to view," www.facebook.com. https://www.facebook.com/groups/713408219007205/ (accessed Aug. 02, 2024).

[15] Google, "Gemini - chat to supercharge your ideas," gemini.google.com, 2024. https://gemini.google.com/app

[16] Microsoft, "Microsoft Copilot: Your everyday AI companion," copilot.microsoft.com, 2024. https://copilot.microsoft.com/