**Literature Review Of Research Papers On Furniture Sales Forecasting**

**1: Literature Review:**

This thesis probably examines current approaches to machine learning-based price prediction, with a particular emphasis on gradient boosting techniques like XGBoost and LightGBM and regression analysis. It probably talks on how well these models work with big, unorganized datasets and emphasizes how useful they are for making accurate pricing forecasts, as seen by numerous sectors. The research highlights how machine learning is becoming more and more relevant for automating pricing methods, especially in complex, data-rich situations such as large furniture enterprises.

**Reference:**

Automation of price prediction using machine learning in a large furniture company

Ghorbanali, Mojtaba

**Link:**

[Automation of price prediction using machine learning in a large furniture company (diva-portal.org)](https://www.diva-portal.org/smash/record.jsf?pid=diva2%3A1746258&dswid=-2996)

**2: Literature Review:**

In order to capture the patterns in retail furniture sales for strategic decision-making, the literature evaluation probably emphasizes the application of MLR and Holt-Winters models in demand forecasting.

**Reference:**

Forecasting Retail Sales for Furniture and Furnishing Items through the Employment of Multiple Linear Regression and Holt–Winters Models  
Melike Nur İnce and Çağatay Taşdemir

**Link:**

[Systems | Free Full-Text | Forecasting Retail Sales for Furniture and Furnishing Items through the Employment of Multiple Linear Regression and Holt&ndash;Winters Models (mdpi.com)](https://www.mdpi.com/2079-8954/12/6/219)

**3: Literature Review:**

This research emphasizes the effectiveness of data mining techniques, particularly deep learning and random forest algorithms, in predicting prices within competitive markets. It highlights the success of data-driven models in various industries, demonstrating their superiority over traditional methods in accurately estimating prices, with specific focus on the furniture industry.

**Reference:**

Predicting Prices of Case Furniture Products Using Web Mining Techniques  
Timucin Bardak

**Link:**

[View of Predicting Prices of Case Furniture Products Using Web Mining Techniques (bioresources.com)](https://ojs.bioresources.com/index.php/BRJ/article/view/22715/662)

**4: Literature Review:**

The challenges of early cost estimation in the production of personalized furniture and the efficiency of machine learning models—specifically, Decision Trees, Random Forest, SVM, and ANN—in enhancing cost prediction accuracy using historical data are probably the main points of emphasis in the research review.

**Reference:**

Early Cost Estimation in Customized Furniture Manufacturing Using Machine Learning  
O. Kurasova, V. Marcinkevičius, V. Medvedev, and B. Mikulskienė

**Link:**

[content (mruni.eu)](https://cris.mruni.eu/server/api/core/bitstreams/0068d83d-e1cf-4075-a162-48c5f23bd49d/content)

**5: Literature Review:**

The literature review examines the significance of precise sales forecasting in manufacturing, specifically in the furniture sector, with a focus on Artificial Neural Networks’ (ANN) ability to increase forecast accuracy. It shows how effective ANN with Bayesian regularization is at predicting sales in competitive markets, and it addresses the applicability of using ANN to handle complex factors like seasonality and consumer confidence.

**Reference:**

Application of Artificial Neural Networks Using Bayesian Training Rule in Sales Forecasting for Furniture Industry  
Melih Yucesan , Muhammet Gul , Erkan Celik

**Link:**

[DrvnaIndustrija\_3-2017.indd (srce.hr)](https://hrcak.srce.hr/file/275782)

**6: Literature Review:**

In this research the transformative impact of machine learning on sales forecasting, focusing on supervised methods like Linear Regression. It discusses the shift from traditional sales techniques to data-driven approaches, emphasizing the use of platforms like Kaggle for data collection and Jupyter Notebook for model training to enhance forecasting accuracy.

**Reference:**

Furniture Sales Forecasting Using Machine Learning Algorithm  
Arya Biju

**Link:**

[Furniture Sales Forecasting Using Machine Learning Algorithm.pdf](file:///C:\Users\PC\Downloads\Furniture%20Sales%20Forecasting%20Using%20Machine%20Learning%20Algorithm.pdf)

**7: Literature Review:**

The literature review looks at a number of retail sales forecasting techniques, including ARIMA, neural networks, and ANFIS, and highlights how well these models work when combined. It demonstrates how combined forecasts, as opposed to single models and current systems, are more accurate at predicting sales for a major international furniture retailer.

**Reference:**

Comparative study on retail sales forecasting between single and combination methods  
Serkan ARAS1, İpek DEVECİ KOCAKOÇ2, Cigdem POLAT

**Link:**Abstract

[Comparative study on retail sales forecasting between single and combination methods: Journal of Business Economics and Management: Vol 18 , No 5 - Get Access (tandfonline.com)](https://www.tandfonline.com/doi/epdf/10.3846/16111699.2017.1367324?needAccess=true)

**8: Literature Review:**

The use of LSTM networks for sales forecasting in the furniture industry is highlighted in the literature review, which also emphasizes how well these networks handle time series data and capture long-term dependencies. It also highlights how crucial data stationarity is to precise forecasting as well as the general increase in forecasting accuracy brought about by machine learning.

**Reference:**

Forecasting Sales in the Supply Chain Based on the LSTM Network: The Case of Furniture Industry Serkan Damian Pliszczuk , Piotr Lesiak , Krzysztof Zuk , Tomasz Cieplak

**Lnk:**[ERSJ24(s2)A52.pdf (um.edu.mt)](https://www.um.edu.mt/library/oar/bitstream/123456789/102829/1/ERSJ24%28s2%29A52.pdf)

**9: Literature Review:**

The application of the SARIMA (Seasonal Autoregressive Integrated Moving Average) model for furniture sales forecasting, particularly in a business with distinct B2B and B2C segments, is the main topic of the literature review. The efficacy of time series methods in forecasting sales trends and future periods is emphasized, with particular attention paid to the model's ability to account for seasonal variations and integrate historical data to produce accurate predictions.

**Reference:**

Time Series Implementation for Sales Forecasting of Furniture Products at PT XYZ

Pragnanta Yopie Pramastya, Evangs Mailoa

**Link:**[Time Series Implementation for Sales Forecasting of Furniture Products at PT XYZ | Pramastya | Jurasik (Jurnal Riset Sistem Informasi dan Teknik Informatika) (tunasbangsa.ac.id)](http://ejurnal.tunasbangsa.ac.id/index.php/jurasik/article/view/818/792)

**10: Literature Review:**

The literature review looks at how the Covid-19 pandemic affected furniture industry demand forecasting, emphasizing how well LSTM neural networks predict demand in emergency situations. It highlights how the model handles seasonal and non-linear demand variations better than traditional inventory planning techniques, proving better forecasting accuracy and responsiveness to the pandemic's disruptions.

**Reference:**

Impact of Covid-19 Pandemic on Demand and Demand Forecasting in a Furniture Wholesale Company

Riadh Al-Haidari \* , Shrouq Al-Rawashdeh , Adam Zeidan , Joshua Omambala , Nagendra Nagarur

**Link:**[preprints202304.0144.v1.pdf](file:///C:\Users\PC\Downloads\preprints202304.0144.v1.pdf)

**11: Literature Review:**

The primary goals of the literature review are to forecast future offers through 2025 and assess the Czech Republic's furniture market using content analysis of business websites. The limitations of concentrating on a small number of companies are emphasized as it discusses the use of regression analysis to forecast the rising volume of furniture offers based on current market data.

**Reference:**

ESTIMATION OF FUTURE DEMAND FOR FURNITURE UP TO 2025

Jiří Kučera, Andrea Bláhová

**Link:**

**12: Literature Review:**

The literature review discusses the application of various machine learning algorithms, such as Random Forest and Gradient Boosting, for forecasting furniture sales. It highlights that Gradient Boosting achieved the best performance with the lowest Mean Absolute Error (MAE) and Root Mean Squared Error (RMSE). The study utilized daily sales data from a major Bulgarian furniture producer over nearly two years, demonstrating the effectiveness of Gradient Boosting in predicting sales.

**Reference:**

Furniture market demand forecasting using machine learning

Approaches

PE Yaneva and H N Kulina

**Link:**

[Yaneva\_2023\_J.\_Phys.\_\_Conf.\_Ser.\_2675\_012008.pdf](file:///C:\Users\PC\Downloads\Yaneva_2023_J._Phys.__Conf._Ser._2675_012008.pdf)

**13: Literature Review:**

The review of the literature looks at how statistical analysis techniques, specifically regression analysis, are used to evaluate differences in furniture and home furnishings retail sales between various U.S. cities. It places a strong emphasis on utilizing p-values and R-squared values to assess model accuracy. In order to comprehend the factors influencing variations in retail sales, the study makes use of a dataset that includes sales figures and city-specific factors.

**Reference:**

VARIATIONS IN RETAIL SALES BETWEEN CITIES FOR FURNITURE, HOME FURNISHINGS AND EQUIPMENT

Charles R. Vitaska

**Link:**

[content (tdl.org)](https://ttu-ir.tdl.org/server/api/core/bitstreams/f6a8761c-b638-4895-b2d2-4725e5046474/content)

**14: Literature Review:**

The literature review investigates how to optimize tactical planning in the furniture supply chain by combining a time decomposition approach with mixed-integer linear programming. It emphasizes the creation of a mathematical model that addresses demand allocation, outsourcing, inventory, and procurement in order to reduce costs without sacrificing quality of service. Supply chain data, including inventory levels and demand forecasts, are used in the study to achieve a noteworthy 22% reduction in operations costs.

**Reference:**

Furniture Supply Chain Tactical Planning Optimization Using a Time Decomposition Approach M. Ouhimmou, S. D’Amours, R. Beauregard, D. Ait-Kadi, and S. Singh Chauhan

**Link:**

[Furniture supply chain tactical planning optimization using a time decomposition approach - ScienceDirect](https://www.sciencedirect.com/science/article/abs/pii/S0377221707006698)

**15: Literature Review:**

The goal of the study is to increase manufacturing effectiveness through the application of mathematical techniques to sustainable optimization in furniture production. It creates a model with an emphasis on variables like feed rate and cutting velocity in order to maximize output and minimize costs. Artificial neural networks can predict process costs and performance with up to 99.65% accuracy for milling time, according to research using regression analysis and these networks.

**Reference:**

Sustainable Optimization of Manufacturing Process Effectiveness in Furniture Production

Andrea Sujova ,Katarina Marcinekova andStefan Hittmar

**Link:**

[Sustainability | Free Full-Text | Sustainable Optimization of Manufacturing Process Effectiveness in Furniture Production (mdpi.com)](https://www.mdpi.com/2071-1050/9/6/923)

**16: Literature Review:**

The study uses models such as SARIMA, Triple Exponential Smoothing, Prophet, LSTM, and CNN to compare traditional and sophisticated time-series forecasting techniques for furniture sales prediction. The results show that Stacked LSTM works best, with Prophet and CNN performing admirably as well. Traditional methods such as ARIMA are less accurate compared to advanced techniques like LSTM and XGBoost.

**Reference:**

Time-series forecasting of seasonal items sales using machine learning – A comparative analysis

Yasaman Ensafi , Saman Hassanzadeh Amin, Guoqing Zhang , Bharat Shah

**Link:**

[Time-series forecasting of seasonal items sales using machine learning - A comparative analysis (sciencedirectassets.com)](https://pdf.sciencedirectassets.com/778772/1-s2.0-S2667096821X00043/1-s2.0-S2667096822000027/main.pdf?X-Amz-Security-Token=IQoJb3JpZ2luX2VjEJP%2F%2F%2F%2F%2F%2F%2F%2F%2F%2FwEaCXVzLWVhc3QtMSJGMEQCICEaauJDDhiAkx7Rl8hzwZTH2wsjrHpOlYQ62Fc5ezb7AiAvM3llhWY9dX71PNWdtAC25TT4HKsB45CKy%2BAG0jP3Diq7BQis%2F%2F%2F%2F%2F%2F%2F%2F%2F%2F8BEAUaDDA1OTAwMzU0Njg2NSIM97RG9xF2IrYYPxKNKo8FuBz8BGAJMLm4yiJXp0yZ7dmb11u67CVGWcVbnSyZ4AnmZZn2zfFZl%2FfRu5e2VzwWwhlfefUNNDMPNidYIgCKfi8T5BIG54xXSQekwaaBbVbuXbnB0yNxkL%2BhiJKpu67bc05%2BCNFgxL0hap50S3IDttZShrI6iA%2F8Pfp5lb3lKBamVImHnPHSn%2Ba8mF1S%2Btb3i3ejhVwI7q6vNSnbrPAySaQKnQYodZm1UjVyrDiPSX80tmD1NvLPl2QiSTI5qYgSb0VS55N2Xq6ChPju7h3%2Br0UlgHccyig6IdVxPXszgn7n4IXoI3Tk74M%2Fgbt%2BBQfmxNgMGTE8yQn12sI1M9UKJGQdC77SdmwO%2BU0xK6rYPG%2FIKzhTa9GCPNog2cNij2MoJpjhahhMGUYv7h28xyb9%2Fnz3yyYHuyGOx7BIBKBhiyKdP9TcUrY2JTN4n7UnItjTRkyZZc9f8eGC7BvbRkDGc%2BsXZkjrY9Qqwg9Pof%2BxLThToUpknfHQkwLV18icPQ5McY1o0KVZnLAfjI5cofXAhQ3X5O4204de7Y6yRD8dsuLF4NONvCReswK%2B%2FlzoYlV5jF86rZDCmqOsE%2FAzmJTp1yV6u1ekrsmFjBFMx11kRLm8nEdwXglJmDAX7WLA9YKqWgfgF1MvyupZwhOwk3%2BpeSPy3bqwkWumRhGGeUNu65TrBMKhWlVimFAtI3EvkCg8zA%2Fag6jH045zIcW%2FYBkZVNJmVbZLMSgCEiPDudT1t93RHSIfEDHeRY9c2k54x3dGkiQcTV%2FXcxyjsSN%2B725dZF%2FzhDdJROK6E2TLHAqrnR80KMXep0Gj9Q%2BhShDx0gyUHeuR1kv5VcMffaUzPKU5w72y2zbDvdpGFWQdY3UJfzDEjdi2BjqyASMcsib%2Fs6cxwAYPGLGu2gqX6TukhrUdBOf4OJBNVON5mkyqds%2B6vfJlK0mpezDITK1CvYanVGXqkqwfD59LCEmP2C7XQZkdWwxZkeu9lxWULW%2Fq%2BCCV9gSKklcNiJmH4GRo4JVM%2Bwhr8VfOEKCNbHk2Zys1dTtThWMoCJErgdNI6%2FPpuVkLWk0GiOQlTOIvtJ3ACDaLSgAsH5adfqH927kyqKrf2U5%2Bt4zRMZcPGsO1L8Y%3D&X-Amz-Algorithm=AWS4-HMAC-SHA256&X-Amz-Date=20240902T193952Z&X-Amz-SignedHeaders=host&X-Amz-Expires=300&X-Amz-Credential=ASIAQ3PHCVTY335PYZ3L%2F20240902%2Fus-east-1%2Fs3%2Faws4_request&X-Amz-Signature=a6d7a7af5ff2b6f2e07710fc0b54889f5ee231420589cc96b2c4832d6b27ef4c&hash=999524adcca2f005ec39bd6e88e09f3ffa403a130b317345e7a9db45bd69c7cf&host=68042c943591013ac2b2430a89b270f6af2c76d8dfd086a07176afe7c76c2c61&pii=S2667096822000027&tid=spdf-8f0c0f3e-b4a3-4f99-bcc0-4decd38371f4&sid=636deb4859d8f84ff80bae181557c715f5b3gxrqb&type=c)