ABSTRACT BOOK

19th Prof. Vladas Gronskas International Scientific Conference

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Kaunas, Lithuania

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RESEARCH OF FACTORS INFLUENCING DOG ADOPTION PROCESSES AND SHELTER STAY DURATION

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The research analyzed over 100 records from the dog shelter “Penkta koja” using Excel and Power BI to identify factors affecting shelter stay duration and adoption speed. The average stay duration was 135.6 days, with dogs averaging 33.0 months old. Correlation analysis revealed that age ($r=-0.45$) negatively correlates with shelter stay duration, while size ($r=0.42$) shows a positive correlation. Multiple linear regression revealed that each additional month of age decreased stay duration by 0.54 days, while larger sizes increased it by 13.32 days. Intake month influenced duration, with a coefficient of -14.11 days. Logistic regression showed that 20.6% of dogs were adopted within 30 days, with age and size as the strongest predictors.
Recommendations include focusing adoption campaigns on older and larger dogs and adjusting staffing and resources during summer and just before Christmas time.

Key words: *dog shelters, adoption, correlation analysis, seasonal trends, shelter efficiency*

Research of Factors Influencing Dog Adoption Processes and Shelter Stay Duration

Jonas Andriuškevičius, Karolis Vaiginis

Problem

Dogs in shelters experience varying lengths of stay, creating challenges for efficient resource allocation and adoption campaigns.

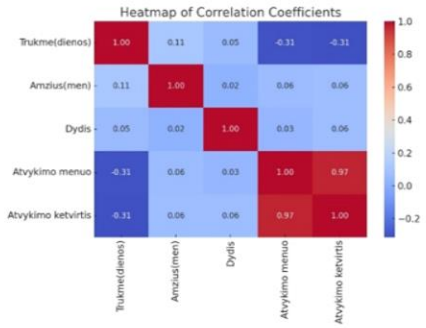
Aim

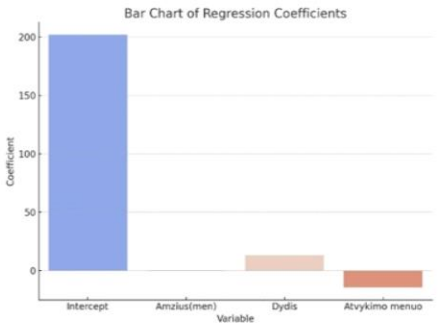
To identify factors that most influence shelter stay duration and adoption speed. Provide a data-driven framework for decision-making in dog shelters.

Research Methods

Excel and PowerBI for data cleaning and descriptive statistics: scatter plots, heatmaps, and regression analyses.

Key Results





Scatter Plot with Regression Line: Age negatively correlates with shelter stay duration (younger dogs are adopted faster). **Bar Chart of Coefficients:** Size and intake month significantly influence the duration. **Residual Plot:** Model fit evaluation showed minimal bias. **Logistic regression** identified "adopted quickly" predictors, with age and size as primary factors.

Recommendations

Focus on larger and older dogs to balance adoption trends. Allocate more resources during peak intake periods (e.g., summer). Include behavioral and health metrics for more nuanced predictive models.

Additional Details

Shelter Data Analysis -"Penkta koja"

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