# Food Price Index Report

Insights from Food Inflation Trends in Tashkent Region (2024–2025)

## 1. Project Overview

This report summarizes key insights discovered during the analysis and forecasting of monthly food price indexes in the Tashkent region. The data spans from January 2024 to May 2025 and includes categories like rice, bread, sweets, and cereals.

## 2. Key Observations & Insights

- The overall inflation trend remains mostly stable, averaging just over 100 each month.

- The highest monthly increase in the general price index occurred in May 2024: \*\*+2.78%\*\*.

- Long-grain rice prices showed high volatility, peaking in April 2024 and dropping sharply by October.

- Bread made from high-grade flour remained highly stable, with near-constant index values.

- Products like cakes, cookies, and pryaniks (gingerbread) showed noticeable seasonal spikes, possibly due to holidays.

- Some categories like first-grade flour showed a steady decrease in price during early 2025.

## 3. Most Volatile Products

The following categories had the most price fluctuations based on standard deviation calculations:

|  |  |
| --- | --- |
| Product | Volatility Indicator |
| Узун бошоқли гуруч (Long-grain rice) | 🌪️ High |
| Пряниклар (Pryaniks) | ⚠️ Medium-High |
| Гречиха (Buckwheat) | ⚠️ Medium |
| Тортлар (Cakes) | 🎯 Spikes |

## 4. Forecasting Insights

Using machine learning models, we predicted next month’s index values. Random Forest performed better than Linear Regression due to its ability to capture nonlinear price trends. Forecasts showed that categories like buckwheat and flour-based products are expected to remain stable.

## 5. Dashboard Summary

A Power BI dashboard was created, including:  
- Time-series line charts of monthly index trends  
- Volatility bar chart for top unstable products  
- Date slicer for dynamic filtering  
- KPI cards showing average index, max spike, and volatility

## 6. Conclusion

This analysis highlights the importance of monitoring food inflation by product category. Our dashboard and ML pipeline provide a reliable way to detect pricing anomalies and make month-ahead predictions, which can assist government planning and retail strategy.