Bernardo Ribeiro

PROJECTS | BUSINESS DATA ANALYTICS PORTFOLIO

Tools: Power BI • DAX • Python • Forecasting • Data Visualization

- **Power BI KPI Dashboard: Downtime & Root Cause Analysis (Planned vs Unplanned)**
- **Python Analytics Dashboard: Sales Insights & Forecasting Model Evaluation**

+351 917803430 | bernardocardeanoribeiro@gmail.com

www.linkedin.com/in/bernardo-ribeiro-ba9983253/

Project 1 - Downtime & KPI's Dashboard (Power BI)

Goal:

Create a KPI dashboard to monitor machine downtime, distinguish planned vs unplanned stops, identify root causes and support action plans for performance improvement

What I built:

- Developed an interactive Power BI dashboard to track OEE/TEEP, downtime hours and machine utilisation.
- Created breakdown analysis of planned vs unplanned stops, including trends over time and comparisons between machines.
- Implemented a stop reason analysis (Pareto-style) to highlight the main drivers of downtime and guide improvement actions.

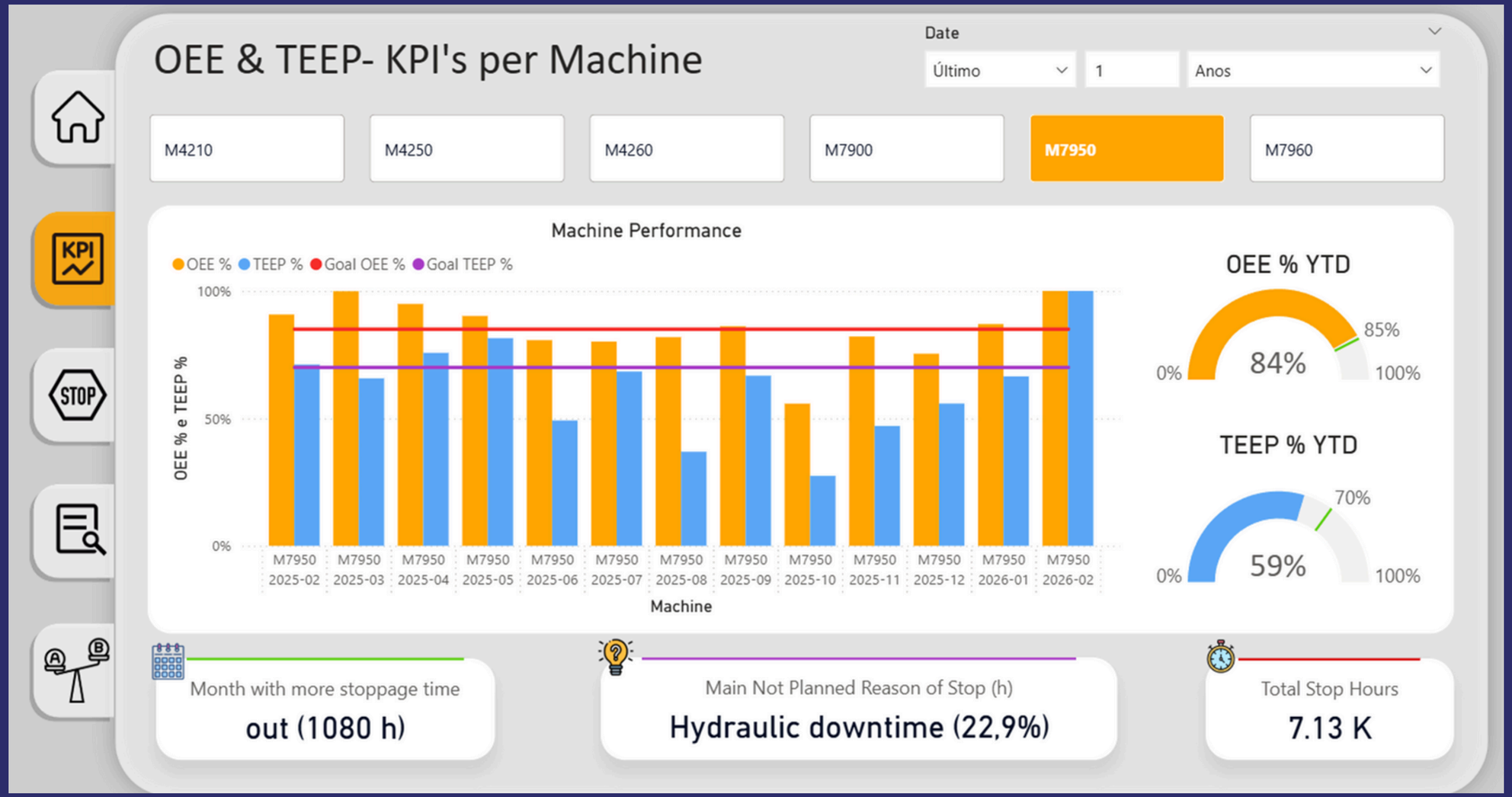
Outcome:

Enabled faster identification of bottlenecks and prioritisation of improvement initiatives based on downtime impact.

Tools:

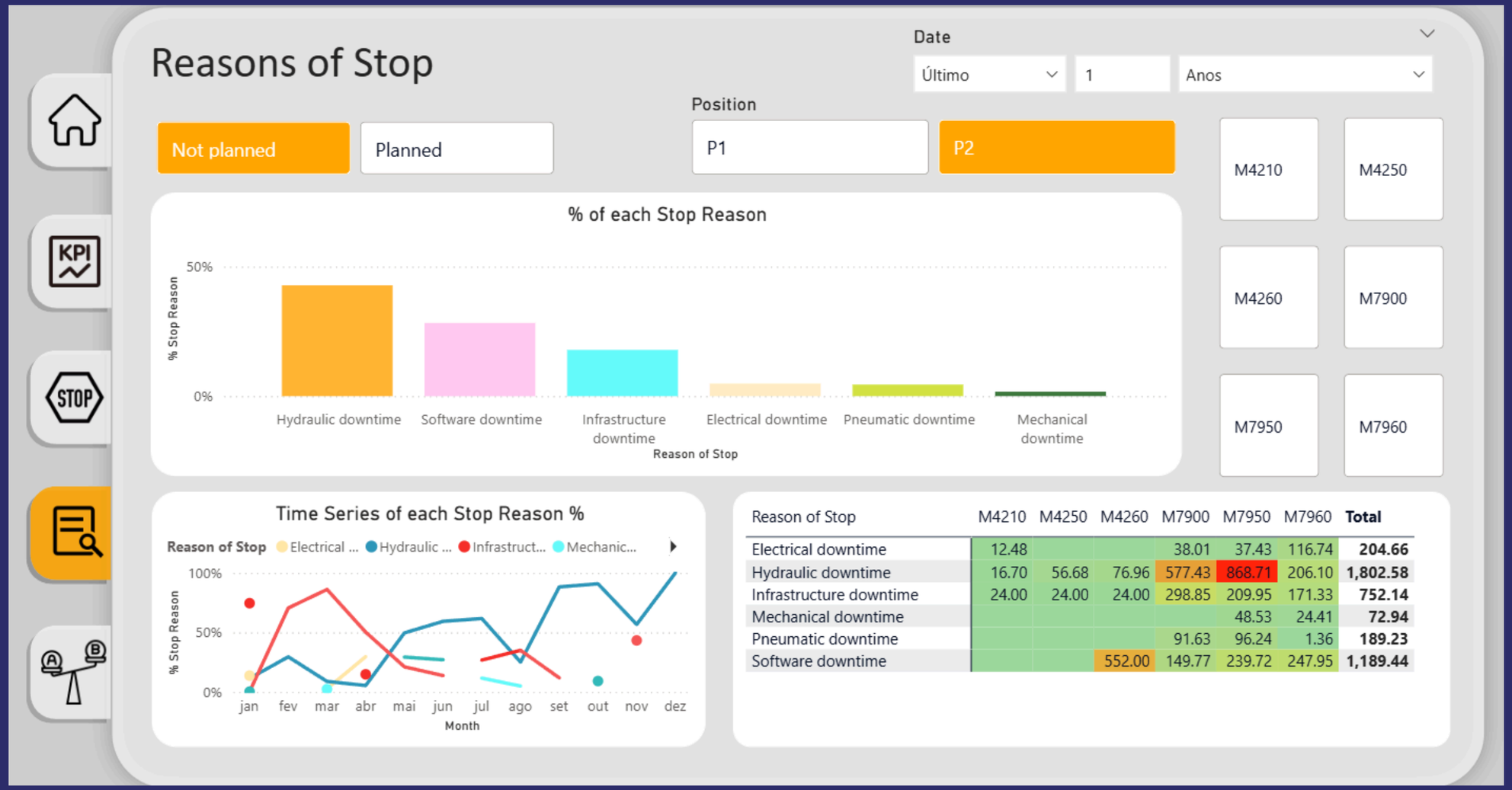
Power BI (DAX, Power Query)

Visual



Note: Dashboards use demo data for confidentiality.

Visual



Reason of Stop	M4210	M4250	M4260	M7900	M7950	M7960	Total
Electrical downtime	12.48			38.01	37.43	116.74	**204.66**
Hydraulic downtime	16.70	56.68	76.96	577.43	868.71	206.10	**1,802.58**
Infrastructure downtime	24.00	24.00	24.00	298.85	209.95	171.33	**752.14**
Mechanical downtime					48.53	24.41	**72.94**
Pneumatic downtime				91.63	96.24	1.36	**189.23**
Software downtime			552.00	149.77	239.72	247.95	**1,189.44**

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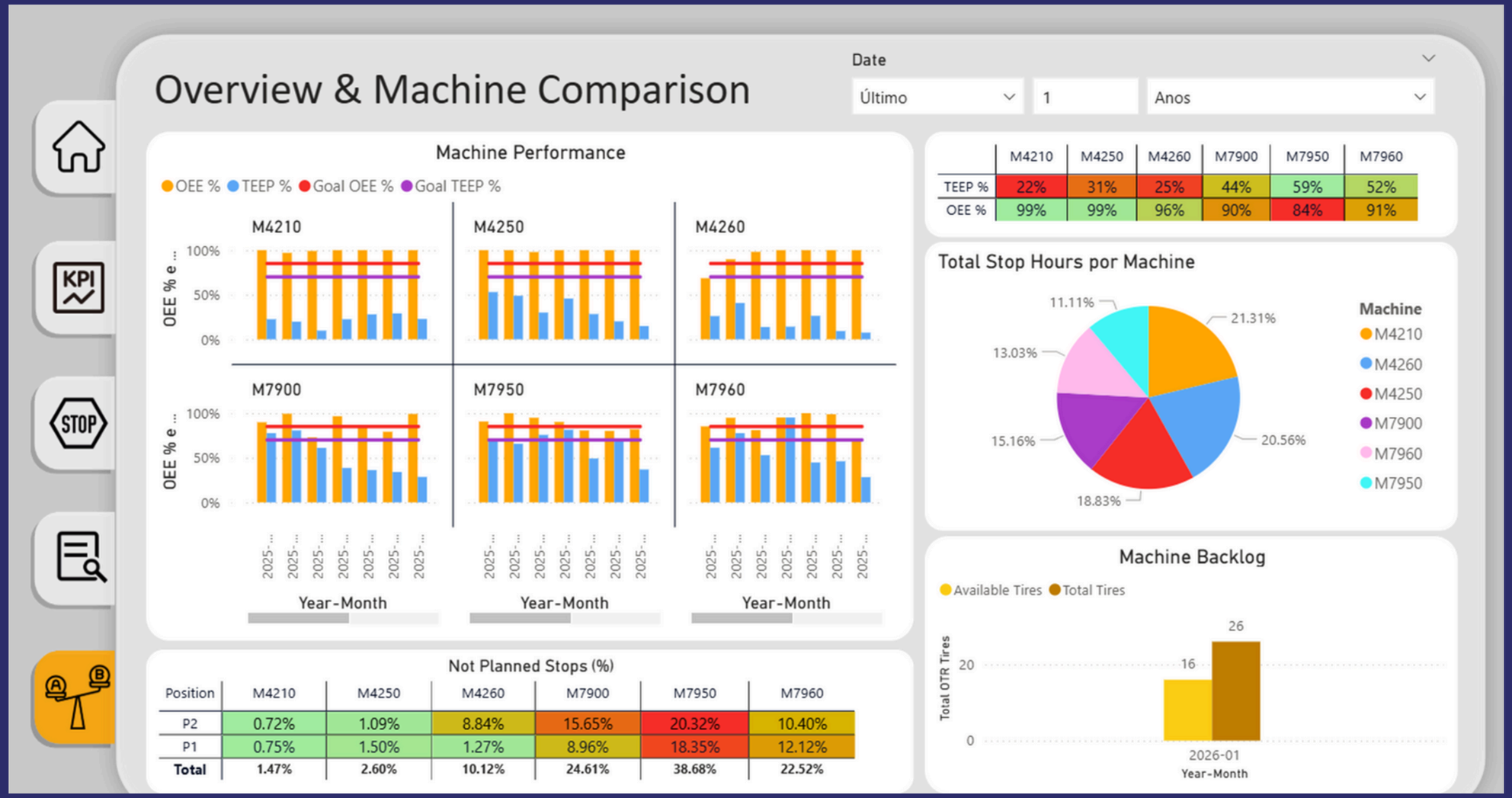
Visual



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Project 2 — Sales Analytics & Forecasting Dashboard (Python)

Goal:

Analyse large sales datasets and identify the most accurate demand forecasting approach to improve prediction reliability and support planning decisions.

What I built:

- Built a Python dashboard to explore sales time series across product families and SKUs with interactive filters and aggregation levels.
- Performed demand classification (e.g., ABC/XYZ logic) to segment products based on volume and variability.
- Tested and compared forecasting methods to improve accuracy, including time-series models and performance tracking.

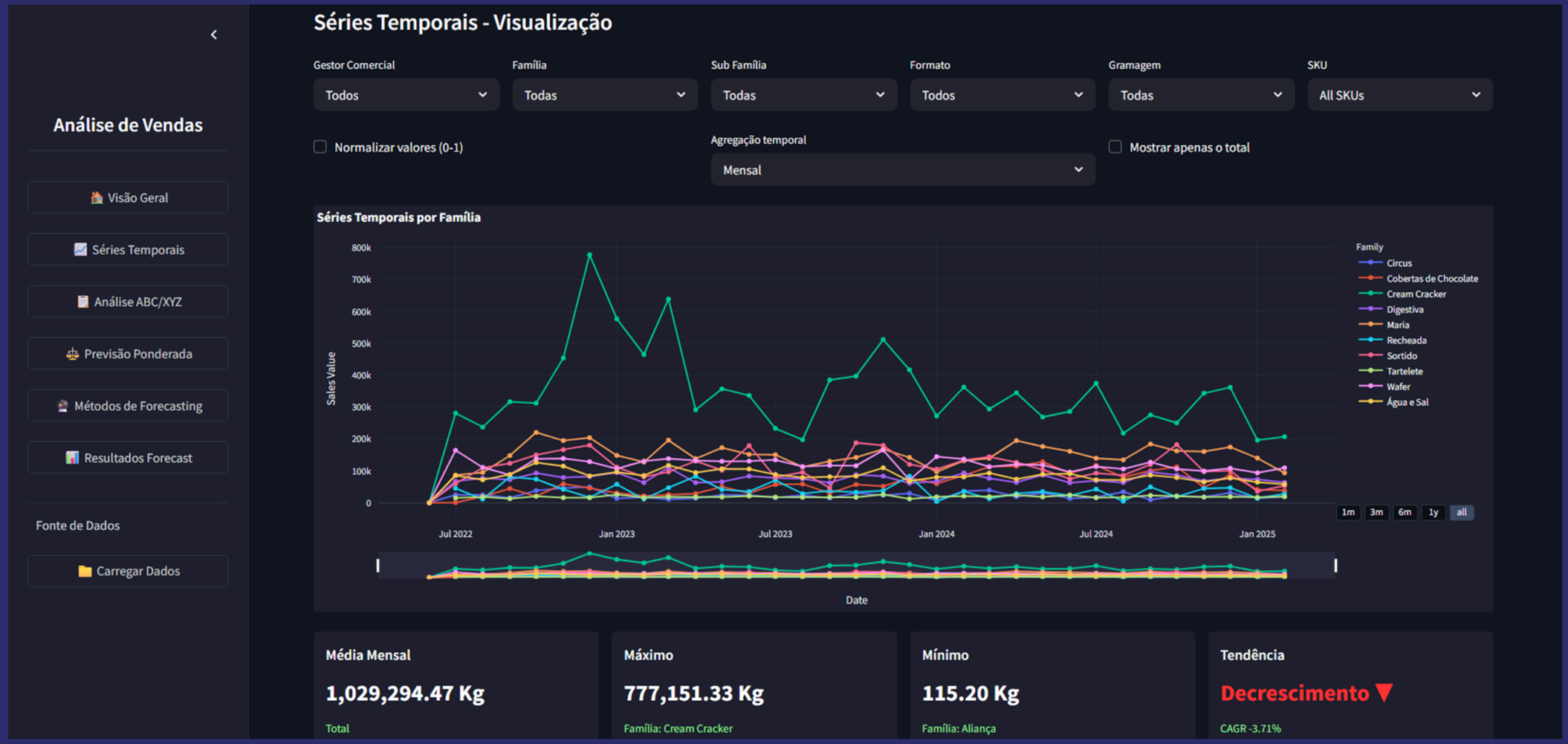
Outcome:

Provided data-driven recommendations for selecting forecasting methods based on demand behaviour and measurable accuracy metrics.

Tools:

Python (pandas, numpy, scikit-learn, statsmodels, matplotlib/plotly)

Visual



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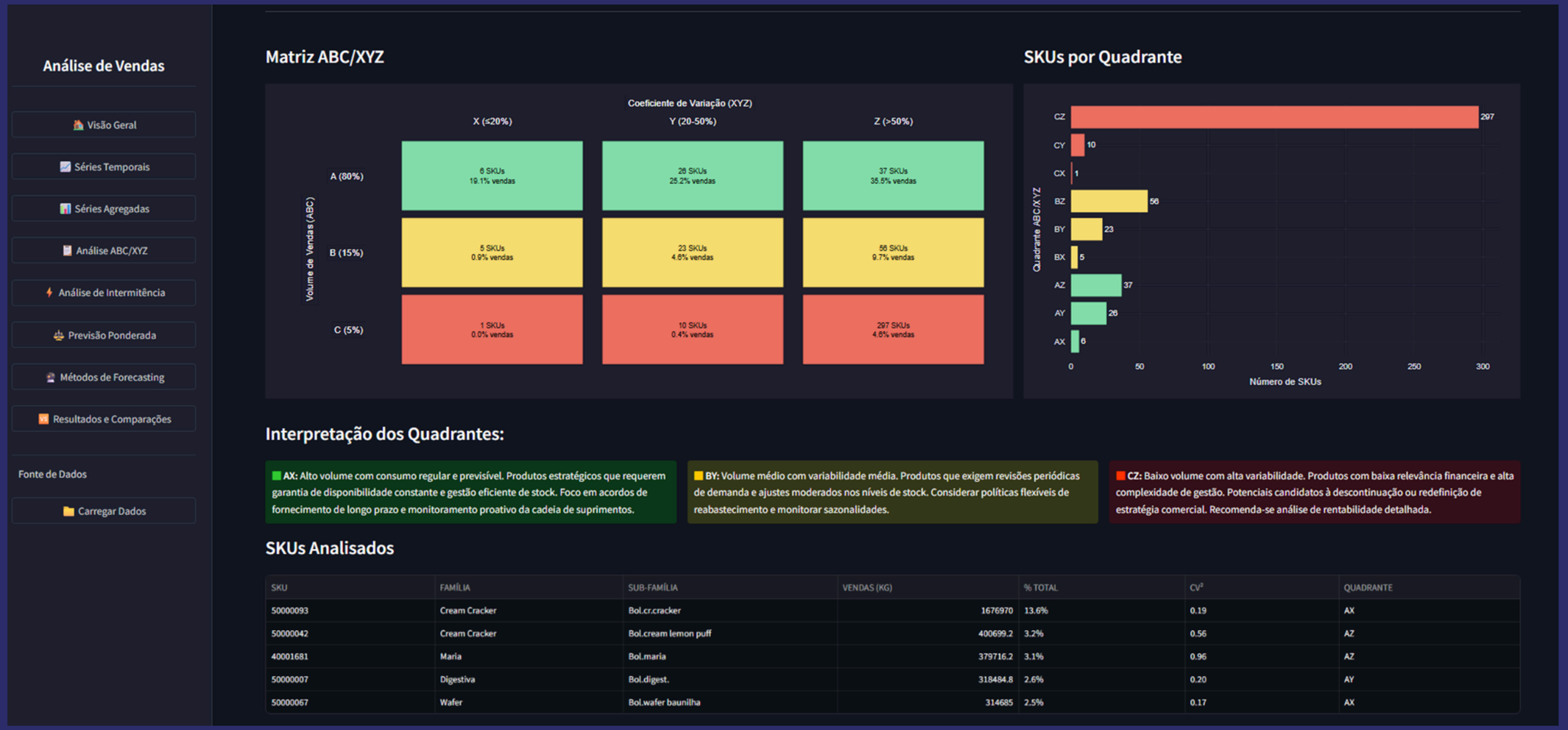
Visual



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Let’s connect

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