

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



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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:

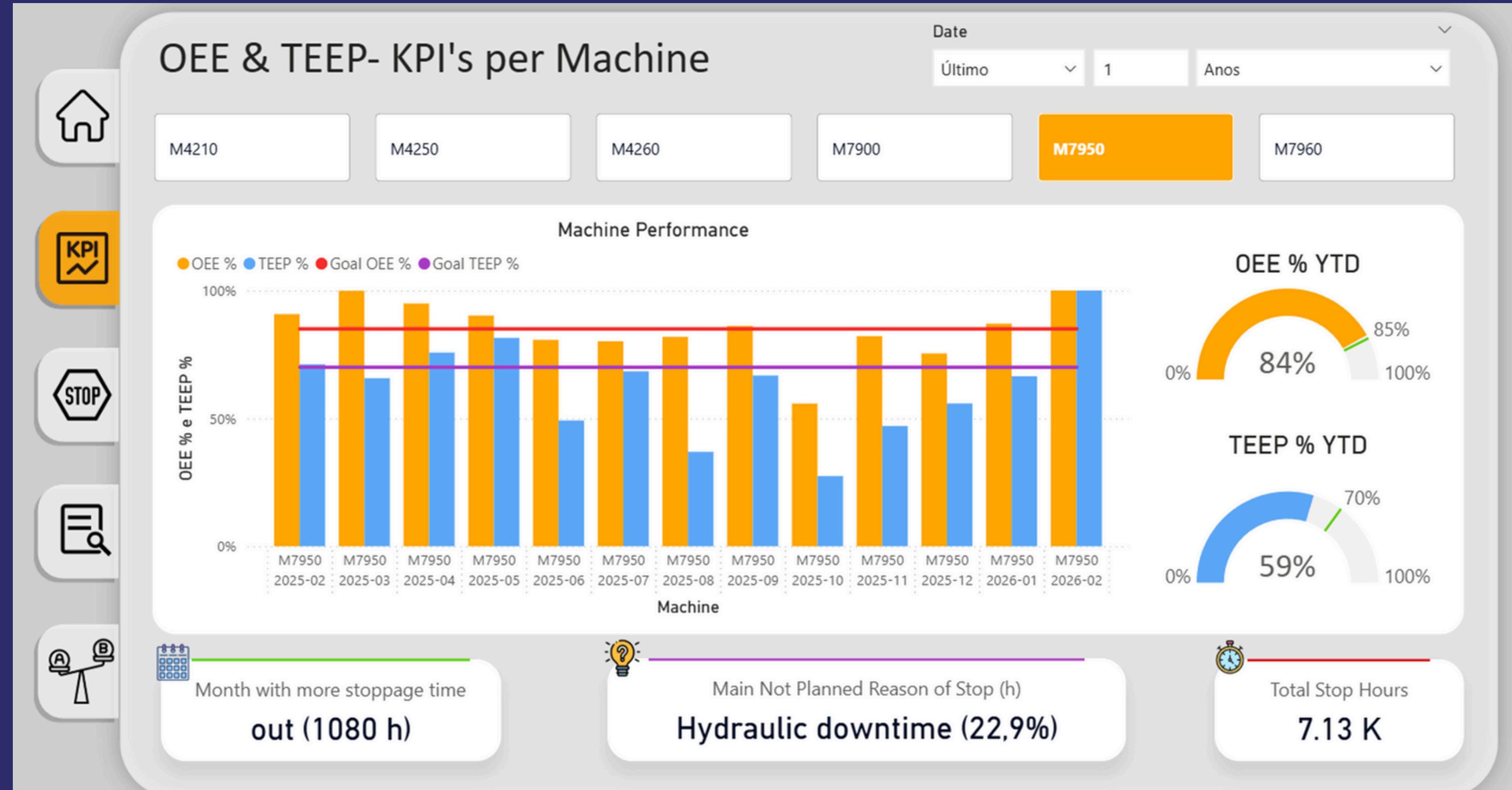
Enabled faster identification of bottlenecks and prioritisation of improvement initiatives based on downtime impact.



Tools:

Power BI (DAX, Power Query)

Visual



Note: Dashboards use demo data for confidentiality.

Visual

Reasons of Stop

Date: Último 1 Anos

Position: P1 P2

Not planned Planned

M4210 M4250
M4260 M7900
M7950 M7960

% of each Stop Reason

Reason of Stop	Percentage
Hydraulic downtime	~45%
Software downtime	~35%
Infrastructure downtime	~15%
Electrical downtime	~5%
Pneumatic downtime	~5%
Mechanical downtime	~2%

Time Series of each Stop Reason %

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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Visual

Overview & Machine Comparison

Date
Último 1 Anos

Machine Performance

Legend: OEE % (Orange), TEEP % (Blue), Goal OEE % (Red), Goal TEEP % (Purple)

	M4210	M4250	M4260	M7900	M7950	M7960
TEEP %	22%	31%	25%	44%	59%	52%
OEE %	99%	99%	96%	90%	84%	91%

Total Stop Hours per Machine

Machine	Share (%)
M4210	11.11%
M4260	21.31%
M4250	13.03%
M7900	18.83%
M7960	15.16%
M7950	20.56%

Not Planned Stops (%)

Position	M4210	M4250	M4260	M7900	M7950	M7960
P2	0.72%	1.09%	8.84%	15.65%	20.32%	10.40%
P1	0.75%	1.50%	1.27%	8.96%	18.35%	12.12%
Total	1.47%	2.60%	10.12%	24.61%	38.68%	22.52%

Machine Backlog

Available Tires (Yellow), Total Tires (Orange)

Year-Month	Total OTR Tires
2026-01	26
2026-01	16

Icons on the left sidebar:

- Home
- KPI
- STOP
- Search
- Compare

Note: Dashboards use demo data for confidentiality.

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:

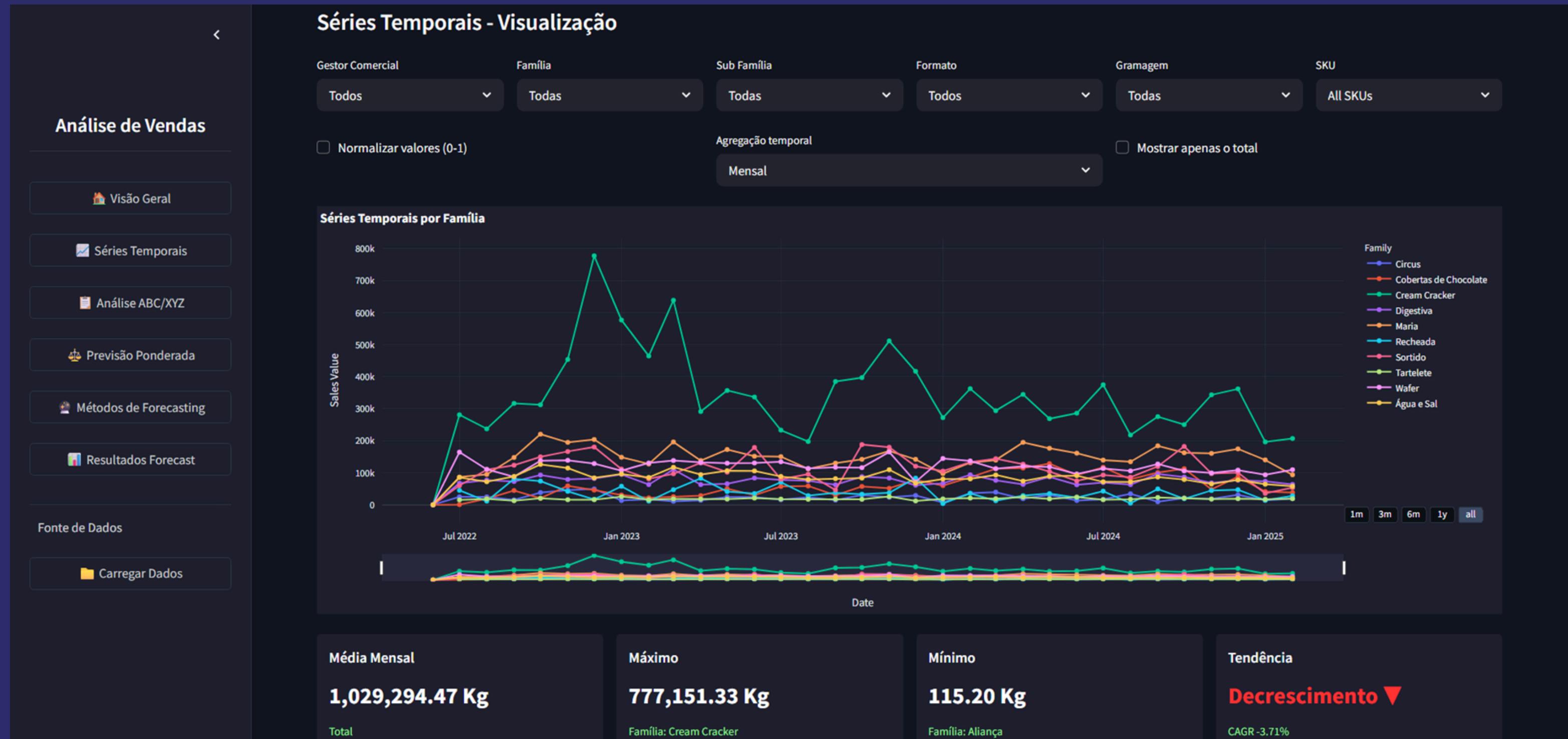
Provided data-driven recommendations for selecting forecasting methods based on demand behaviour and measurable accuracy metrics.



Tools:

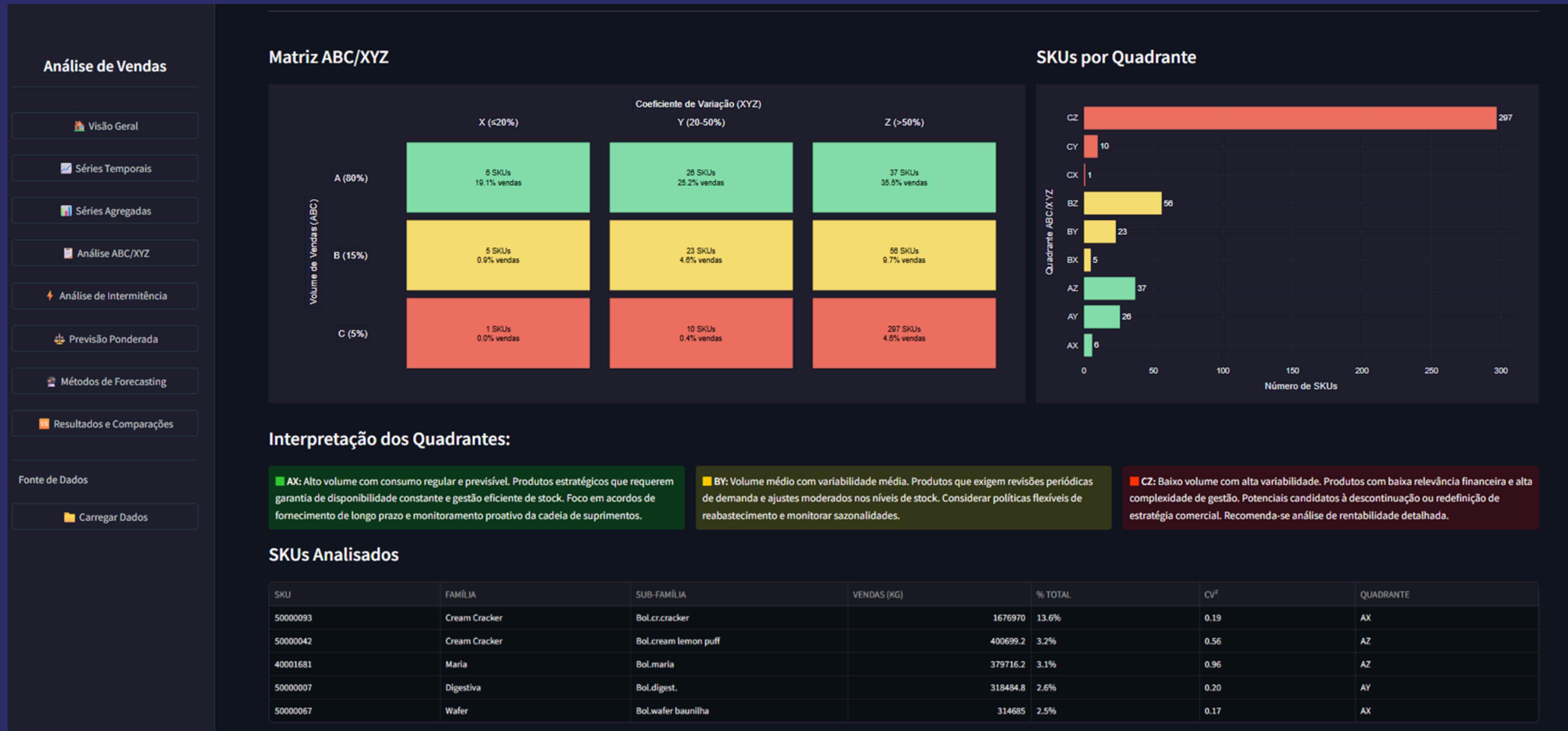
Python (pandas, numpy, scikit-learn, statsmodels, matplotlib/plotly)

Visual



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Visual



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Let's connect



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