# 02_dashboard

October 25, 2025

```python
[1]: import pandas as pd
     import numpy as np
     import matplotlib.pyplot as plt
     import seaborn as sns

     # Cargar datos
     df = pd.read_csv("../data/leadership_toxicity_kpis.csv")

     # Estilo visual
     sns.set_theme(style="whitegrid", context="talk")

     # Gráfico 1: distribución de toxicidad
     plt.figure(figsize=(8,5))
     sns.histplot(df["supervisor_toxicity"], kde=True, color="red")
     plt.title("Distribution of Supervisor Toxicity Levels")
     plt.savefig("../reports/toxicity_distribution.png")
     plt.show()
```
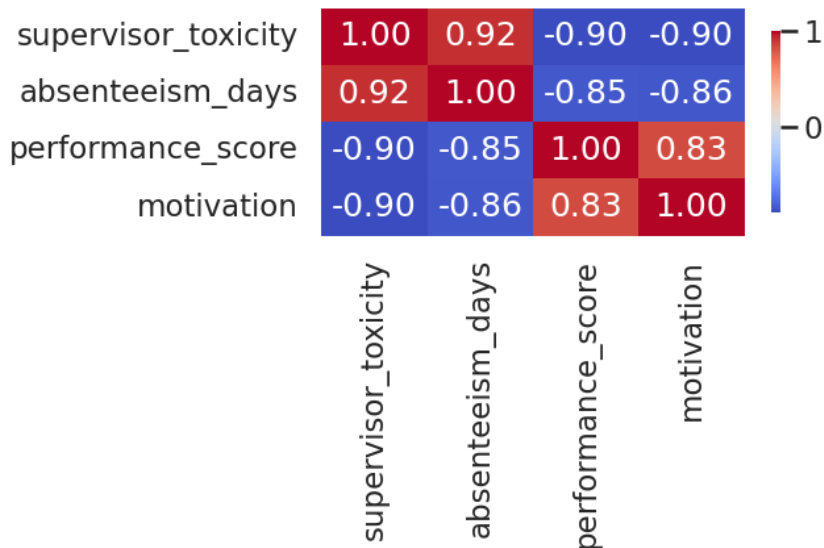
Distribution of Supervisor Toxicity Levels
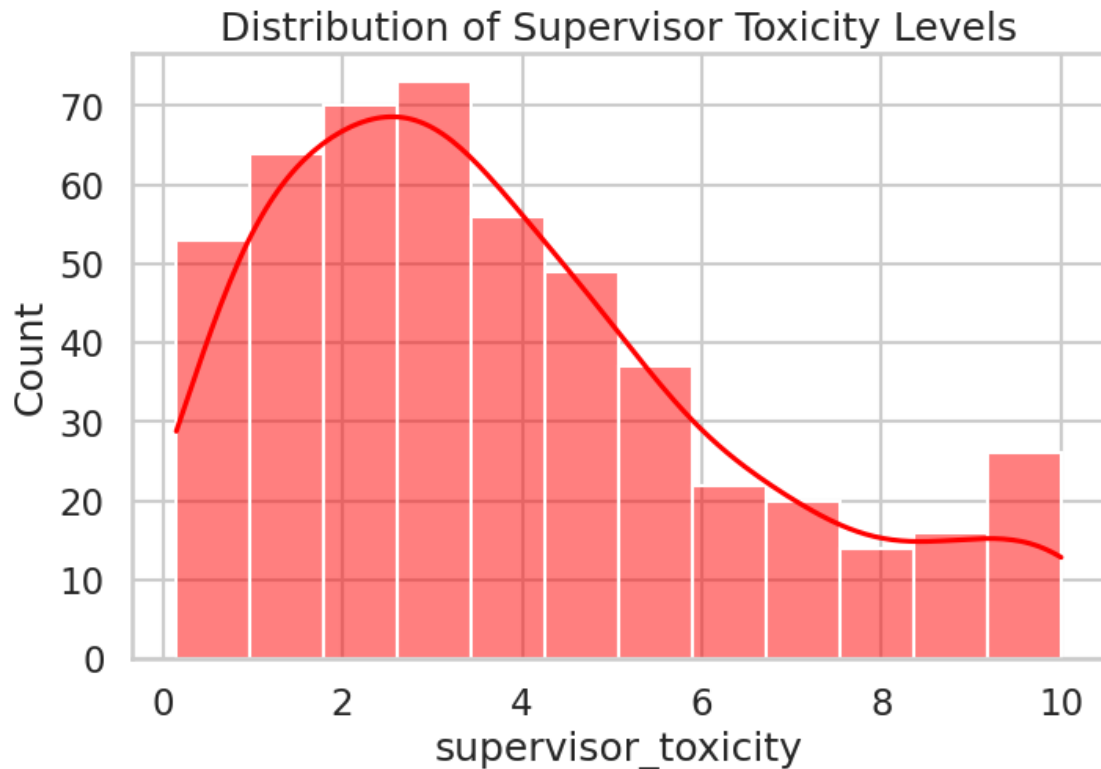
[6]:
```
# Correlación entre variables clave
plt.figure(figsize=(7,5))
corr =␣
 ↪df[["supervisor_toxicity","absenteeism_days","performance_score","motivation"]].
 ↪corr()
sns.heatmap(corr, annot=True, cmap="coolwarm", fmt=".2f", cbar_kws={"shrink": 0.
 ↪8})
plt.title("Correlation Matrix: Toxicity, Absenteeism, Performance, Motivation",␣
 ↪pad=12)
plt.tight_layout()
plt.savefig("../reports/correlations_heatmap.png", bbox_inches="tight", dpi=300)
plt.show()
```

Correlation Matrix: Toxicity, Absenteeism, Performance, Motivation

	supervisor_toxicity	absenteeism_days	performance_score	motivation
supervisor_toxicity	1.00	0.92	-0.90	-0.90
absenteeism_days	0.92	1.00	-0.85	-0.86
performance_score	-0.90	-0.85	1.00	0.83
motivation	-0.90	-0.86	0.83	1.00

[ ]:

0.0.1 Ethical Interpretation

This dashboard suggests that toxic supervision correlates strongly with: - Higher absenteeism rates
- Lower performance
- Reduced motivation

Ethical auditing of workplace performance means **translating data into accountability**.
Numbers alone do not condemn — they **reveal systemic patterns** that leadership must address.

```
[5]:  # KPI summary (visual) y guardado en /reports
      import numpy as np

      kpis = {
          "Avg Toxicity": df["supervisor_toxicity"].mean(),
          "Avg Absenteeism (days/q)": df["absenteeism_days"].mean(),
          "Avg Performance": df["performance_score"].mean(),
          "Avg Motivation": df["motivation"].mean(),
          "Boundary Blur Rate": df["boundary_blur_flag"].mean() * 100,   # %
          "Mean Boundary Violations": df["boundary_violations"].mean(),
      }
      kpi_s = pd.Series(kpis).round(2)

      plt.figure(figsize=(8,4.5))
      sns.barplot(x=kpi_s.values, y=kpi_s.index, orient="h")
      plt.title("Workplace Ethics KPI Summary")
      plt.xlabel("Value")
```
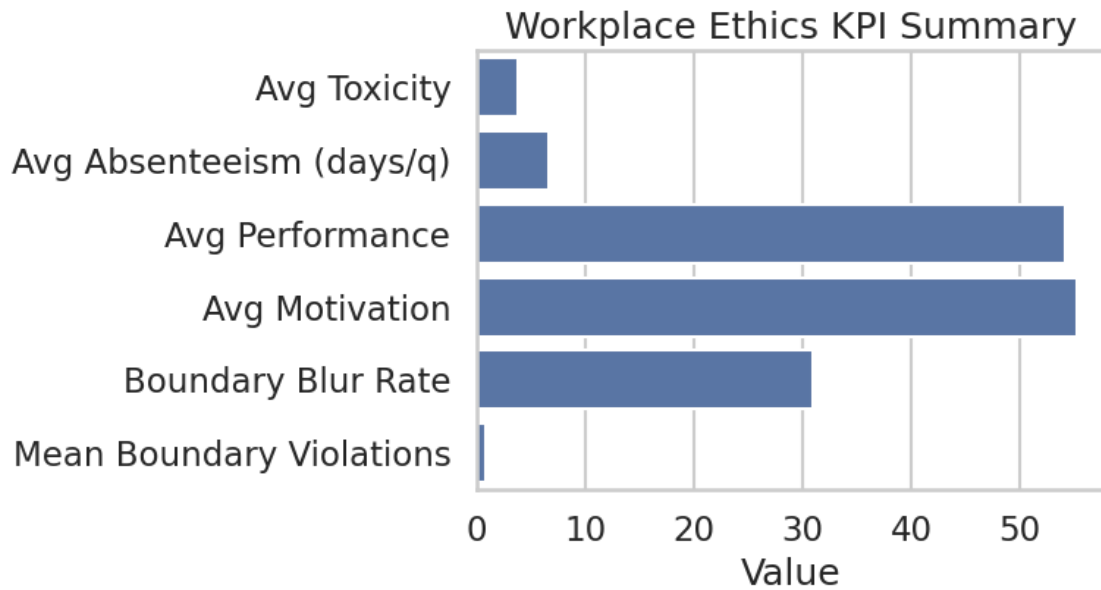
```
plt.ylabel("")
plt.tight_layout()
plt.savefig("../reports/kpi_summary.png", dpi=160, bbox_inches="tight")
plt.show()

kpi_s
```

Workplace Ethics KPI Summary

[5]:
```
Avg Toxicity               3.83
Avg Absenteeism (days/q)   6.67
Avg Performance           54.21
Avg Motivation            55.22
Boundary Blur Rate        31.00
Mean Boundary Violations   0.87
dtype: float64
```