

# Report: Recommended Salary Prediction for New Hires

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## Objective of the Analysis

The goal of this analysis was to develop a predictive model that can recommend a fair salary for a potential new hire, aligned with the existing internal salary structure. This supports internal equity and facilitates offer decisions during recruitment.

## Data Used

The analysis was conducted on internal employee data without splitting into training and test sets, as the goal was to precisely replicate the current salary structure.

Model input variables:

- Age
- Gender
- Department
- Job Complexity Level
- Education Level

## Model Results (XGBoost Regression)

- $R^2$  Score: 0.999
- Mean Absolute Error (MAE): €26.25
- Mean Absolute Percentage Error (MAPE): 1.84%

These metrics demonstrate high model accuracy in replicating current salaries, making it suitable for recommending fair salary offers to new hires.

## Feature Importance

The analysis shows that the most influential features on salary were:

- Job Complexity Level
- Department

Variables such as gender, age, and education level had a smaller impact on prediction.

## **Conclusion and Recommendation**

The model can be confidently used for:

- Recommending salaries for new hires
- Maintaining internal fairness in salary distribution

The model is implemented through a simple application available to recruiters and HR teams.