

Tool: Model Card

The rubric presented here is a follow-up card that summarizes the main characteristics of a machine-learning-based decision-making or decision support system and highlights the main assumptions, the most important characteristics of the system, and the mitigation measures implemented (Mitchell et al. 2019).

Planning and Design	
1. Basic information	
People who developed the model, date, version, type.	
2. Use cases	
Background	
Target population and forecast horizon	
Actors and components that will interact with the results	
Use cases considered during development	
Uses not considered and related warnings	
Definition of protected groups	

Data Collection and Processing

3. Training data

Dataset used and its labeling	
Preprocessing or data preparation steps	
Potential biases and shortcomings depending on the use case (2)	

Model Building and Validation

4. Modeling

Algorithms that were used for training, assumed parameters or constraints	
Input or assumptions made using expert knowledge	
Data interaction (no interaction, active interaction, passive interaction)	

5. Performance metrics

Technical metrics used to select and evaluate models	
Cost-benefit analysis of the model for its use case according to (2)	
Definition of protected groups and selected fairness measures	

6. Validation data	
Datasets used and their labeling.	
Pre-processing steps.	
Evaluation of adaptation of validation data according to the use case (2).	
Potential biases and shortcomings depending on the use case (2)	

7. Quantitative analysis summary

<p>Validation error reported.</p>	
<p>Summary of cost-benefit analysis.</p>	
<p>Report of fairness measures for protected groups</p>	

Deployment and Monitoring

8. Monitoring recommendations

<p>Monitoring and improvement strategy in production</p>	
<p>Human monitoring strategies (if applicable)</p>	

Accountability

9. Explainable predictions

Strategy to explain particular predictions	
Strategy to understand the importance of different attributes	

10. Other ethical considerations, recommendations, and warnings

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