



How context influences model selection

Predicting disability duration probabilities

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Model selection



What drives model selection?

Theoretical concerns

- **Business goals**
 - Output type
 - «Client»
 - **Explainability/Interpretability**
- Adequacy
- Accuracy
- Scalability

Practical concerns

- **Business constraints (time, budget, data, end-user)**
- Infrastructure
 - Software availability
 - Model availability
 - Reproducibility

Business context



A similar topic, two independent approaches

Common ground

IP (or GSC claims)

Interest in the claims' potential duration/closing behavior



Business context

A similar topic, two different contexts

Diverging goals

Support claim managers' prioritization with:

- Identification of unexpected durations
- Closing probability scores at defined points in time

Support pricing team for quotations and reserving team with reserve amounts:

- Estimating total cost of a claim
- Provide flexible standalone tool

Different contexts

- Core business, field specialists serving multiple clients
- Fee based service on middle to long term basis
- Pre defined and stable data quality

- Spin-off from a data science project
- Replacement of a reserving tool
- Internal purposes
- Built from one, not specifically generated, dataset

Context influences modelling



Diverging goals

Select and fit the best possible model at each selected duration

Select and fit the best possible model capable of predicting at any duration

Different contexts

- Extensive time to fine tune the approach due to:
 - Recurring updates of multiple models
 - Continuously incoming data

- Limitations in time and budget allocated
- Need to be a recognized approach
- For technical people
- Data limitations in quantity and features