Q: Did you participate in discussions about the model's objectives?

A: We had meetings to understand the problem the model would solve and define a strategy to achieve its objective. In my first month of work, I read documents to understand more about the business and legal terms.

Q: What documents did you consult?

A: Several research reports were developed at the beginning of the project. I consulted one about the system, which contained some use cases explaining the problem we had to solve. I also consulted another report on decision trees and other AI techniques researched. These documents helped me to understand the business faster.

Q: And do you remember who attended these definition meetings?

A: All the team participated, including data scientists, domain experts, UX designers, and software engineers. Client representatives also participated in some meetings. Even with the help of the reports, many project definitions constantly changed, so I was always learning during the project. The domain experts were always by our side to answer questions, which was essential for building the model. We created a flowchart with all the rules the model considered and documented the meetings through minutes. We even had an episode where it was necessary to resort to these minutes to prove that the team had made certain decisions in a previous encounter.

Q: Were the ML-enabled system's objectives clear to you?

A: These definitions changed throughout the project. In the beginning, for example, we had defined that the model would be as flexible as possible. We realized during later meetings this would not be well accepted, as it would make the model's results less predictable. In our case, estimating a target accuracy for the model was also difficult. We then defined that a supervisory committee, composed of client representatives, would be responsible for validating the results produced.

Q: How was the functionality of the model within the system defined?

A: This was a long process. We had to generate results and explain the business rules behind them and how the model worked to the client. There was an expectation that the model would learn automatically without these fixed rules. However, the clients voted in favor of them to prevent the model from creating deals that involved a lot of money and to prevent them from becoming biased towards some consumer or company. Establishing these well-defined rules contributed to the transparency of the model.

Q: How were the data used to train the model obtained?

A: Since we worked with legal processes containing sensitive data, we needed a secure way to obtain them. The development team defined how this would be done together with client representatives. They created a tool to download the data and make it available on our server. This download is done manually whenever new data is available. The data consisted

of PDFs of different processes. During data analysis, we also requested more data from the client.

Q: Were there any difficulties during data analysis?

A: Yes, we needed to annotate the text in the PDFs, which is a complicated task. We devised several methods to extract the data. We had to discuss the amount of annotated data needed to train and test the model, how long this annotation would take, and the best way to perform this annotation. The development team helped us to create a text annotation system and make it available to the domain experts. They indicated which document parameters were most interesting for extraction and annotated the data for us, which we used for model training.

Q: Did any other actors participate in data activities besides data scientists?

A: No, it was only our team with the domain experts. The results, however, were presented to everyone.

Q: Has an effort been made to document the data?

A: We created a dictionary for the extracted data, which we stored in spreadsheets. The first action we took after obtaining the data was to analyze it and understand its meaning, which we did with the help of the domain experts. We also documented the models' accuracy during the tests and our client presentations.

Q: What difficulties appeared during the construction of the model?

A: Throughout the project, we discussed what data we would take into account to generate the proposal for the settlement agreement, and it took us a while to figure out what data we needed to request from the client. We defined some data fields during development, while others were defined during meetings.

Q: How was the consumption mode of the model defined?

A: Among the data scientists, I had the most experience outside the research field, so I was responsible for the API that the rest of the system would use to consume the model. Other developers helped me, showing me if I was developing the API correctly.

Q: Was there any discussion about model updates and implementing incremental learning?

A: The model's behavior is dictated by a decision tree, whose configuration we defined in a JSON file. Therefore, to update the model or add a new rule, it is only necessary to modify this file. However, it is important to know about the structure of the tree nodes to change the tree correctly.

We defined that, from time to time, the model would be retrained with new data to update the parameters used. The client wanted the training to be done automatically, but this process is still ongoing.

Q: How was the relationship with the software engineers during the integration of the model with the rest of the system?

A: After the development of the API, what changed the most was the model's input and output data. The software engineers documented the input data, while we documented the output data in our repository. When there is a change, like new data that needs to be included in the API, or when there is an issue, we communicate directly through a channel in Slack. We then update the documentation afterward, if needed. We do not have any problems in terms of communication between the teams, as the software engineers are very attentive and available to us.