

## **Sprint Retrospective Meeting Minutes**

Attendees: Stefany Castro, Alyaa Mossa, Chelsea Ross, Fernando Mata, Ogabek Rakhimov

Start time: 6:12 PM

End time: 7:03PM

### **What went wrong?**

- Did we do a good job estimating our team's velocity?
  - Yes
- Did we do a good job estimating the points (time required) for each user story?
  - Yes
- Did each team member work as scheduled?
  - Yes

### **What Went Well**

- The machine learning models from the previous sprint were successfully trained and evaluated, providing a strong foundation for further development.
- Data preprocessing and feature engineering were completed effectively, ensuring that the dataset is clean and suitable for explainability analysis.
- The team established a clear pipeline for model training and evaluation, making it easier to extend into explainability and UI integration.
- Collaboration between team members was effective, allowing tasks such as data processing and model development to be completed on time.

### **What Could Be Improved**

- While the model achieved reasonable performance, it currently lacks interpretability, making it difficult to understand how predictions are being made.
- There is limited visibility into which features are most influential, which is critical for a healthcare-based application.
- Integration between different components (data, model, and future UI) has not yet been fully established.
- Documentation of model behavior and outputs could be improved to support the next phase of development.

### **Action Items for Sprint 5**

#### **Process Improvements:**

- Begin planning integration (model + explainability + UI) earlier in the sprint to avoid bottlenecks later.
- Introduce incremental testing when adding new components instead of waiting until full implementation.

- Improve task distribution by aligning responsibilities with upcoming sprint goals (explainability, validation, UI).
- Maintain more consistent documentation throughout development to track progress and decisions.

#### Product Improvements:

- Add explainability methods such as SHAP to better understand model predictions.
- Identify and visualize key features contributing to CKD predictions to improve transparency.
- Develop a user interface that allows interaction with the model and displays predictions clearly.
- Ensure that model outputs align with known clinical indicators such as creatinine and eGFR to improve reliability.

#### Overall Reflection

- The previous sprint successfully established a working machine learning model, which serves as the foundation for the next phase of development.
- However, the system is still limited in terms of interpretability and usability, which are essential for healthcare applications.
- Sprint 5 will focus on bridging this gap by introducing explainability and user interaction, moving the project closer to a real-world, deployable solution.
- Overall, the team is well-positioned to build upon the existing work and enhance both the functionality and usability of the system in the upcoming sprint.