First of all the red thread and the introduction is easy and understandable. Particularly, the part where you mention all the sections and what to expect from them. Secondly, the Contributions section works as a good way to remind the reader of the key points explored in the report. And thirdly, the data descriptions with a table of all the variables is very clear and informative.

The following are some improvements that could be made corresponding to each section of the report.

Introduction

- Could use a more precise description of the state of the art methods, and an explanation of how and why you use them.

Data

- As shown by your illustration of data, there are clear differences between the proportion of low, medium and high risk of recidivism. So it would be nice if you argue for putting medium and high risk together.
- The data visualisations could be improved:
    - It is a bit unclear what you try to show, and maybe a matrix showing the probability of each category's classification being correct would be better.
    - It is unclear why you showed high in the middle of the barplots.
    - Maybe do some considerations on whether to show proportions or amount.
- Due to the inclarity of bias definition it is hard to see how the permutation test is going to analyse it.

Bayesian optimization

- You focus a lot on the bayesian optimization compared to the focus of the report.
- You start describing the BO in the FFNN section and maybe it could be moved down to the BO section.

Reproducibility

- Could use a more comprehensive description on how you choose the variables you are working with. We would not be able to reproduce this part: "As for feature selection every feature was randomly shuffled with re-sampling. If the outputs remained unchanged regardless of the permutation the feature was dropped. Every feature is permuted 1000 times.".

Small things

- Describe what COMPAS dataset is briefly in the introduction and remember to reference it.
- There are minor inclarities caused by missing words and spelling mistakes.
- The neural network image does not correlate exactly with the description. Maybe have 2 nodes as output layers (as described) and denote the hidden layers with a variable amount instead of 13 (e.g. R^n_1 , R^n_2 and R^n_3).

And, finally the introduction is clear and it is easy to get a feeling for where the report is going. It is also great that you considered there might be issues with not anonymised data set and examined the rules regarding use of the data set.

Q 1: Why did you put data of medium and high risk of recidivism together? Could’t it have been a ternary-classification?

Q 2: How exactly did you do your feature selection?

Q 3: What precise bias definition are you working with. E.g. equalized odds?

Q 4: What is the key method you will be using to overcome this bias applying the state of the art and other methods you mentioned?

Q 5: How do you measure the bias in the data? In the model?