# Review of: "Rules Extraction, Diagnoses and Prognosis of Diabetes and its Comorbidities using Deep Learning Analytics with Semantics on Big Data"

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Potential competing interests: No potential competing interests to declare.

1. **The paper provides a comprehensive analysis of diabetes mellitus (DM) and its comorbidities using both tabular and text datasets. The selection of relevant features through various techniques like RFE and correlation analysis is commendable, contributing to the accuracy of the results.**
2. **The comparison of FPG and HbA1c for prediction was a significant finding, showing FPG as a better predictor. The study's focus on ethnic groups and geographical regions added depth to the research, making it relevant on a global scale.**
3. **The use of advanced ML and NLP tools on cloud platforms showcased the authors' commitment to exploring diverse methodologies. The achieved diagnostic accuracy of up to 100% using deep multinomial learning is impressive and highlights the potential of such techniques in medical diagnostics.**
4. **The discussion on patient profiles and their diagnosis with DM and comorbidities provided valuable insights. However, further clarity on how the models differentiate between similar diseases is needed, as some confusion was observed in the confusion matrix.**
5. **The inclusion of specific patient case studies enriched the paper's practical relevance. However, more details on data collection and privacy protection protocols would strengthen the ethical aspect of the research.**
6. **The researchers' desire for a larger dataset is valid, as it would improve the generalization and robustness of the models. Emphasizing the challenges and solutions to data collection could enhance the paper's value.**
7. **The heat maps and graphical representations presented a clear picture of the relationships between features and diagnoses. Adding more visuals to support other findings would aid readers in grasping the complex information better.**
8. **The incorporation of deep multinomial learning with Fastai for textual and tabular data analysis was a promising step. However, further discussions on potential limitations and future improvements in these techniques are essential.**
9. **The paper's future recommendations for including additional diseases like Hepatogenous Diabetes and Antecedent Diabetes, along with Covid-19, are relevant. Emphasizing how these additions could impact the accuracy and scope of the research would be insightful.**
10. **Overall, the paper is a commendable effort in the field of medical diagnostics, providing valuable insights into DM and its comorbidities. Addressing some minor clarity and presentation issues would further enhance its**

**impact and readability.**