Predicting Diabetes

- Predicting diabetes using a variety of health-related attributes.
- Machine Learning Models included Logistic Regression, SVC, Neural Network, Decision Tree, Random Forest, and K-NN.
- The best three models were Random Forest, K-NN, and Decision Tree.
    - Below are the scores from my best models.

	model	accuracy	fScore	precision	recall
0	K-NN	0.9558	0.701754	0.822785	0.611765
1	Random Forest	0.9698	0.787623	0.979021	0.658824
2	Decision Tree	0.9540	0.726841	0.733813	0.720000

- Below are the best results from the three papers referenced, each listed by title.
    - *Prediction of Type 2 Diabetes Using Machine Learning Classification Models*

	model	accuracy	fScore	precision
0	Decision Tree	0.840	0.891	0.912
1	Random Forest	0.941	0.959	0.976

    - *Diabetes Prediction Using Machine Learning Techniques*

	model	acurracy
0	K-NN	0.70
1	Decision Tree	0.78
2	Random Forest	0.80

    - A data-driven approach to predicting diabetes and cardiovascular disease with machine learning

	model	accuracy	fScore	precision	recall
0	Random Forest	0.937	0.86	0.86	0.86

References

Dinh, A., Miertschin, S., Young, A., & Mohanty, S. D. (2019, November 6). *A data-driven approach to predicting diabetes and cardiovascular disease with Machine Learning - BMC Medical Informatics and Decision making*. SpringerLink. https://link.springer.com/article/10.1186/s12911-019-0918-5

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Tigga, N. P., & Garg, S. (2020, April 16). *Prediction of Type 2 Diabetes using Machine Learning Classification Methods*. Procedia Computer Science. https://www.sciencedirect.com/science/article/pii/S1877050920308024