

<https://colab.research.google.com/drive/1ymBDHuNDwPQb7pVUdoPgQUN1SVHcAC1g?usp=sharing>

Going through the data given (using python libraries for visualization), there seems to be some issues with the data.

All orders seem to be for lunch – most of the data is between 10am and 2pm, hence this can't be used to predict general meals.

In addition, the students are not equally represented – there are a few large universities (ISU) that have a lot more data. The data is also unequally spread by majors.

The orders are evenly spread, which shows the data might have been picked from a larger source.

Respecting user privacy and receiving informed consent for data collection are ethical considerations in this particular use case of anticipating food orders based on user data. It is essential to make sure that the information utilized to make predictions doesn't provide discriminatory results or feed preconceptions. Users should always have the ability to opt out or alter their data, and it is crucial that the predictions' methodology is transparent. To foster confidence and uphold a positive reputation, the company should also manage consumer data with the highest security and adhere to pertinent data protection standards.

Ensuring ethical data use in this environment aligns with beneficial outcomes for the business outcomes. By placing a high value on user privacy and consent, the business may establish a solid reputation for responsible data processing, which will increase consumer loyalty and confidence. A more inclusive and diversified consumer base may result from avoiding discriminatory predictions and upholding transparency, thereby increasing market reach. Additionally, adhering to data protection laws reduces legal risks and shields users from any financial fines. The company's reputation, customer connections, and long-term success are all positively impacted by ethical considerations.

In order to maintain privacy and openness, it is important to optimize data handling procedures while discussing the technical consequences of these factors. Strong encryption and safe storage techniques are implemented to protect data security and lower the danger of breaches. Advanced data analytics methods are required to locate biases in predictions and correct them, improving model accuracy. Adopting ethical data use may need for more computing resources and knowledge, which may raise operating expenses. In general, the technical considerations entail striking a balance between data protection and effective data processing for morally and environmentally responsible activities.

The accuracy of the current method, which is currently 65%, presents a problem. Several factors must be considered before this solution can be considered implementable. It is crucial to address the accuracy issue since it highlights the need for considerable improvements. Future needs include enhancing the model's algorithms, increasing the caliber and volume of training data, and fine-tuning pertinent parameters. To guarantee that the solution satisfies the performance requirements necessary for realistic business application, a noticeably better accuracy rate must be attained.

Other models also will have to be evaluated.