**Team 1 Project 2 Spring 2024 CSCI 440-01E:**

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**Sprint Planning:**

* Sprint goals: Integrate a machine learning model with our existing hotel booking website to predict future bookings.
* Work to be done: Choosing data sources, ML models, data processing, ML model training, and integration with the website.
* How the work will be accomplished: The team will break the work into smaller steps, and work on them until they are completed.

**Daily Standup:**

3/18 - 3/22

* Review project requirements and research Machine learning models.

3/25 - 3/29

* Found a hotel booking dataset to use for the input. Review what machine learning is.

4/1 - 4/5

* Decided on using the Python library Pandas for the dataset input. However, found out another model would be needed for the prediction model.

4/8 - 4/12

* Experimented with pandas to simplify the dataset and target the values we need. Decided to use Sklearn and linear regression for the prediction model..

4/15 - 4/19

* Created the prediction model with Sklearn and linear regression, however, the model seemed inaccurate to the data input.
* Attempted to fix the model by changing the library and model. After experimentation, the library was not the problem as the new Pytorch library had similar problems. Switching to Cat Boost successfully improved model accuracy.
* Successfully implemented the model to the main website and finished troubleshooting.

**Sprint Retrospective:**

* Reviewed ways to increase quality and effectiveness.
* Inspected the project outcome with respect to individual team members, interactions, processes, tools, and their Definition of Done.
* Identified necessary changes to improve the project.