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Weekly Analytics Report

25/06/2024

This is a project for organizing data collection, data processing, and machine learning tasks related to NBA player statistics, specifically to determine valuable players among the DETROIT PISTONS.

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Goals

- Primary goal: Determine which players on the Detroit Pistons are valuable after 1 season of play.
- Secondary goals:
  - Understand the data and perform analytics on its specifications and data insights.
  - Perform basic statistical modeling on the data.
  - Use neural nets like MLP, ARIMA, and LSTM to predict what to do with the players.

Key Features

- Collect and analyze data on Detroit Pistons players.
- Perform statistical modeling and analysis on the data.
- Use neural networks like MLP, ARIMA, and LSTM for player predictions.
- Generate insights and analysis based on the data.

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Analytics

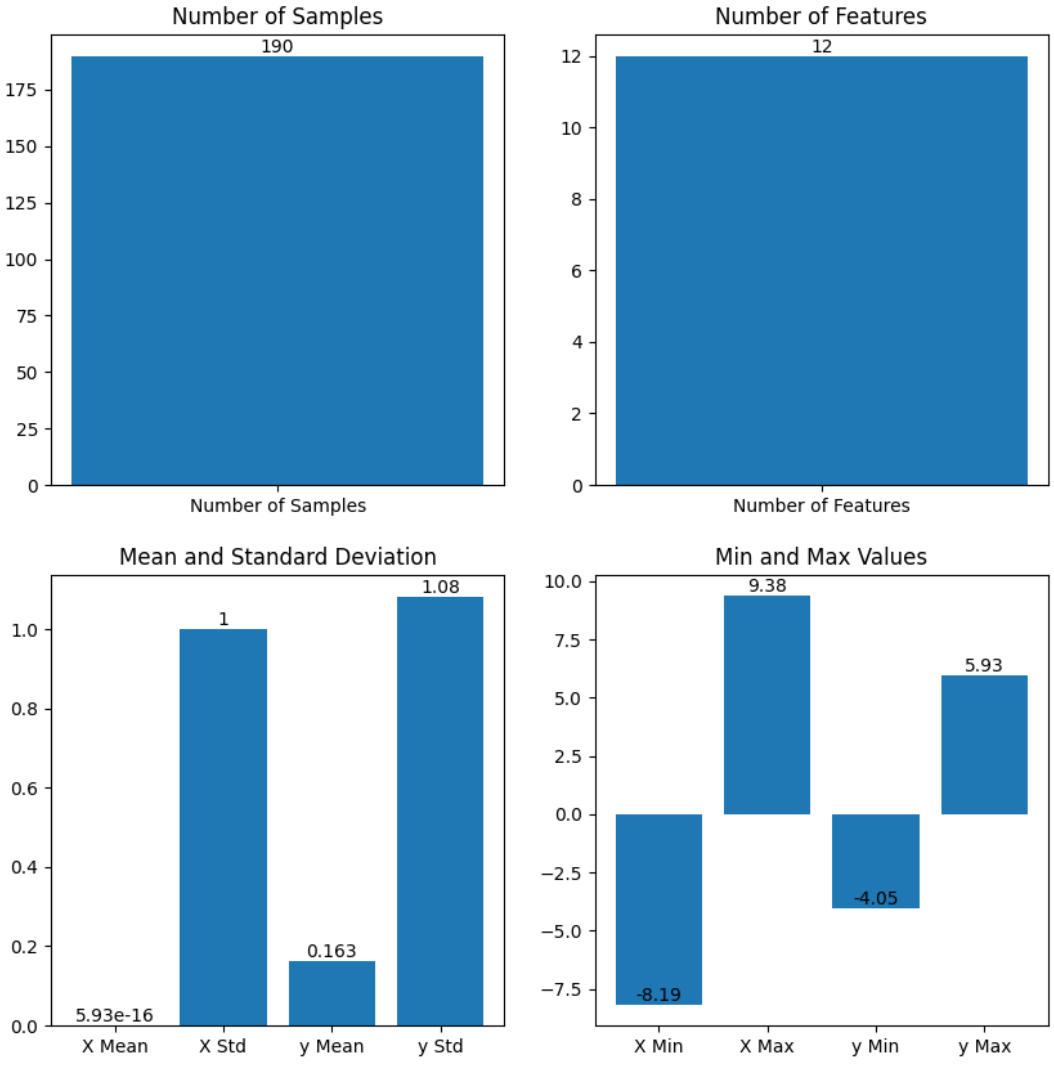
Data Specifications:

- Original DataFrame: Entries=13210, Unique Players=2377
- Filtered DataFrame: Entries=950, Unique Players=190

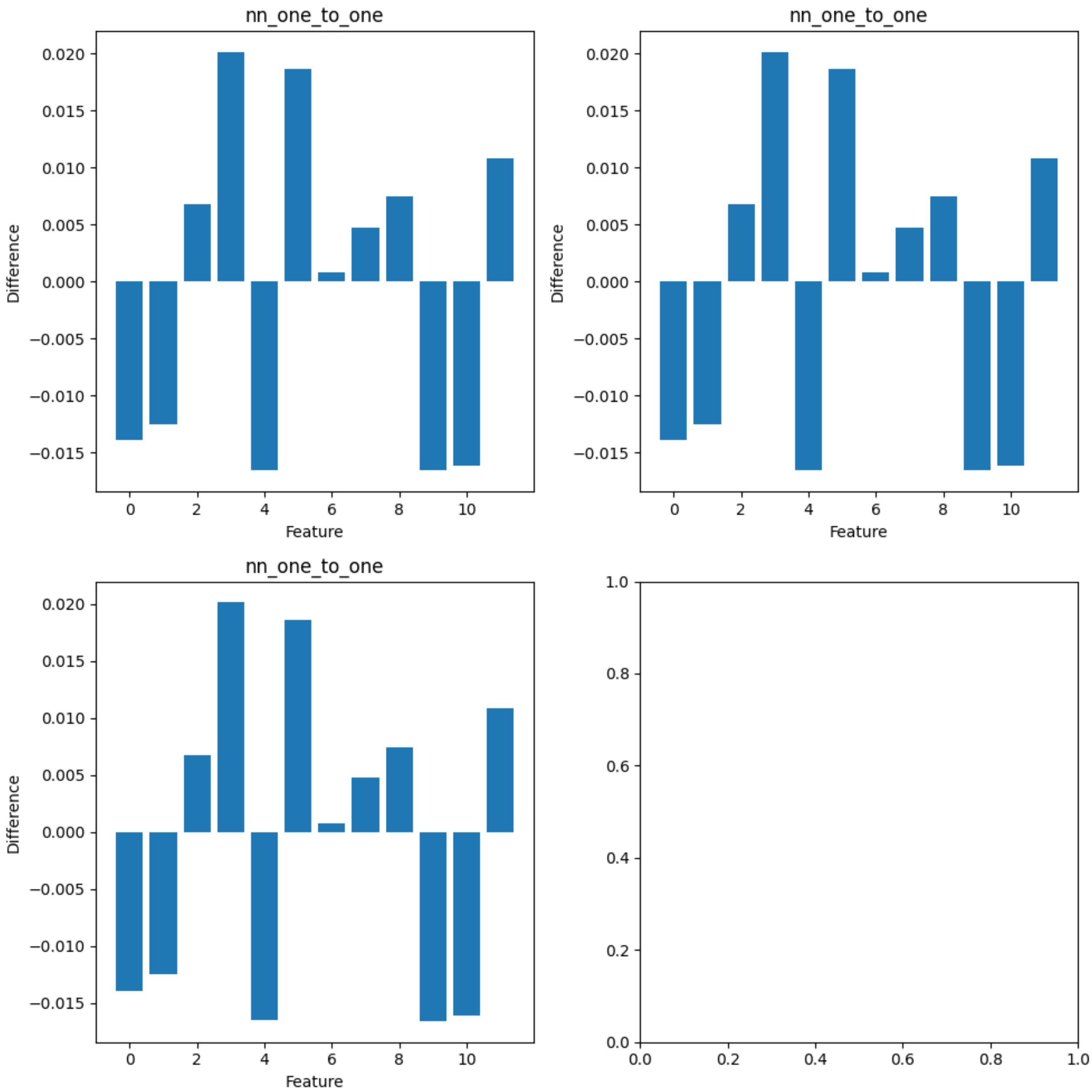
Insights and Analysis:

- [Insight 1]
- [Insight 2]
- [Insight 3]

1. The graph below demonstates the basic analytics of the NBA dataset:



2. The visualisations below show model prediction comparisons:


nn_one_to_one
nn_one_to_one
nn_one_to_one
Difference
Feature
0.020
0.015
0.010
0.005
0.000
−0.005
−0.010
−0.015
0
2
4
6
8
10
0.0
0.2
0.4
0.6
0.8
1.0

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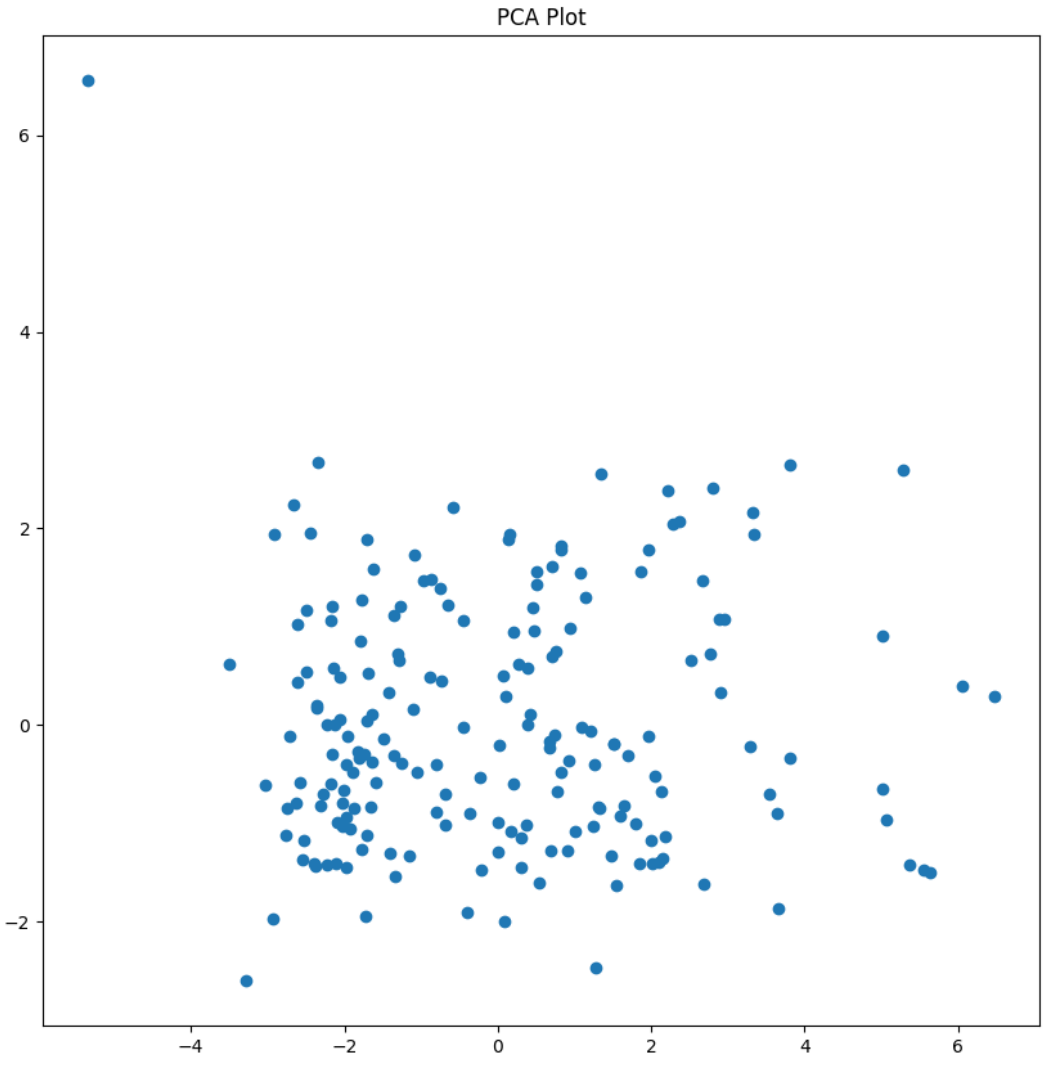
3. The graphs below show further analysis via PCA, showing dataset sample relationships.



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Productivity

The table below shows the last 7 days of git commits:

	Message	Date
0	0.3.9-2024-25-06: Started report automation pr...	2024-06-25
1	0.3.8-2024-23-06: Updated use_models.py to wo...	2024-06-24
2	0.3.7-2024-22-06: Updated nn to include many-t...	2024-06-22
3	0.3.6-2024-21-06: Updated dataset and improved...	2024-06-21
4	0.3.5-2024-19-06: New schedule in readme and u...	2024-06-20