Analysis and Dashboard Creation for Sports Activities Data

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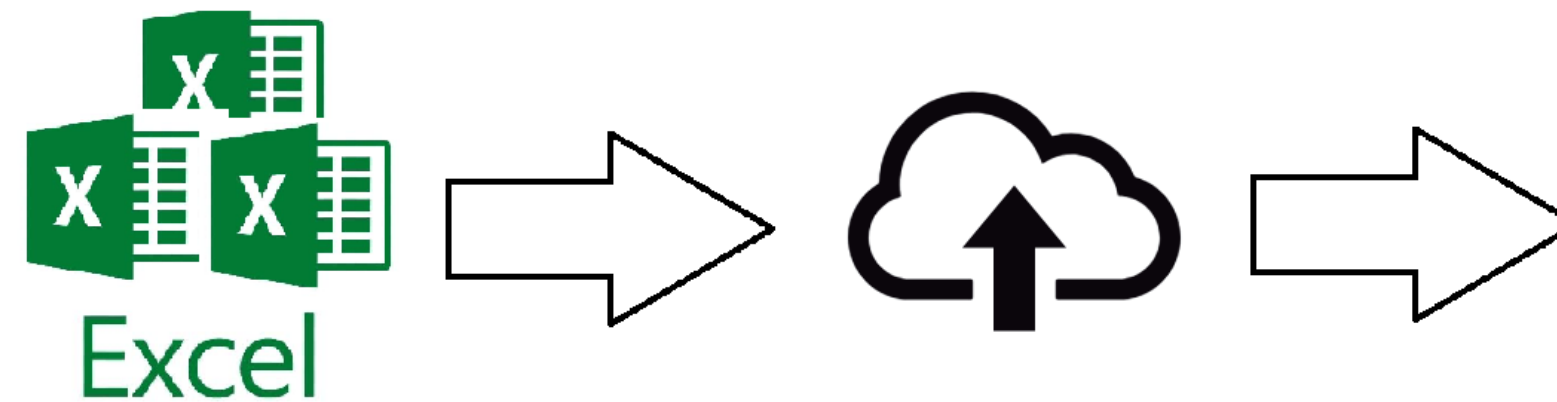**MSc in Information Technology**

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Background

Sportscotland carries out annual research on the charges for publicly funded sport facilities in Scotland. Information is collected from every local authority or leisure trust operating facilities across Scotland.

Sportscotland has undertaken this annual research since 1985, which would allow for analysis of trends over time.

The survey collects charges from over 70 different activities or facilities covering indoor, outdoor, and swimming. The same basic information has been collected across a large time period. Full trend data is available from 1997 to 2018.
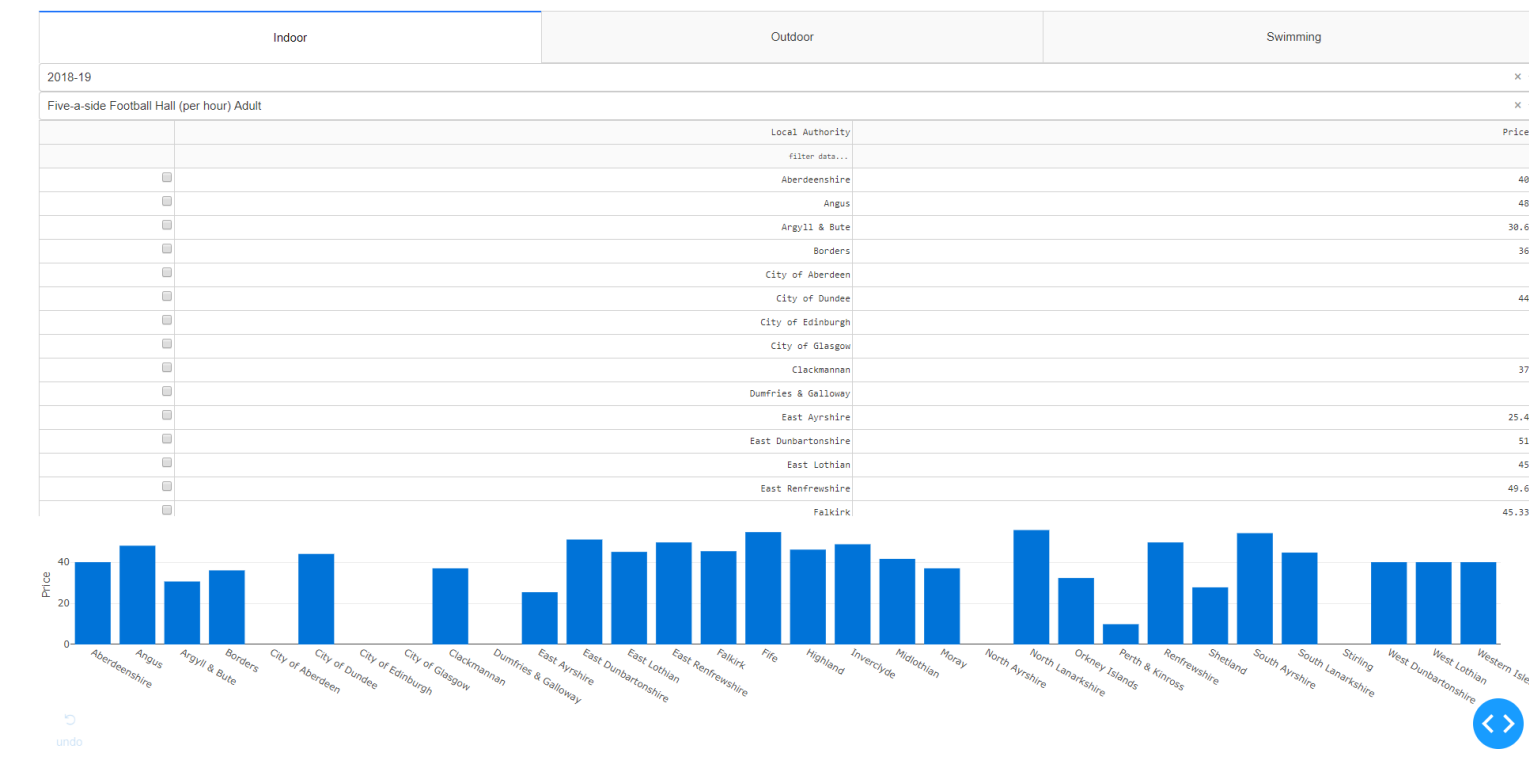
Outputs From Project

The project involves two main parts: building a dashboard of results for the easy access of data and analysis of the data for long term trends and find any correlations or patterns within the data.

The data is comprised of tens of sporting activiities broken into different age groups and local authorities within Scotland and their pricing information; the purpose of the dashboard is to be able to filter the data appropriately as well as visualize it.

The analysis of the data will be done to extract useful insights and trends. Some predictive analysis will also be used in an attempt to use the data to forecast future trends.

Technologies and Analysis Technqiues

The above technologies are used for dashboard implementation: python 3, django, numpy, Dash by plotly, pandas, and matplotlib.

Various analysis and predictive techniques will be used including liner regression, logistic regression, and neural networks. WEKA will also be used for general analysis for trend spotting.