

Accompanying this document is the jupyter (.ipynb) file. To aid in any compatibility issues I have detailed making the notebook trusted and showing any html content. In lieu of this not working.

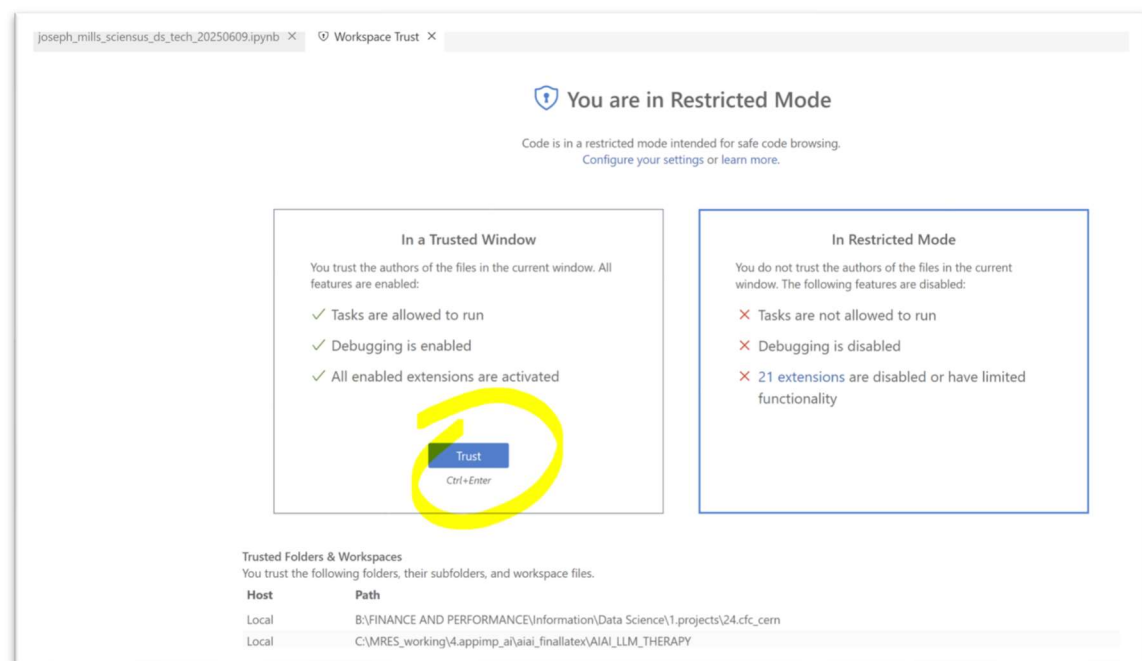
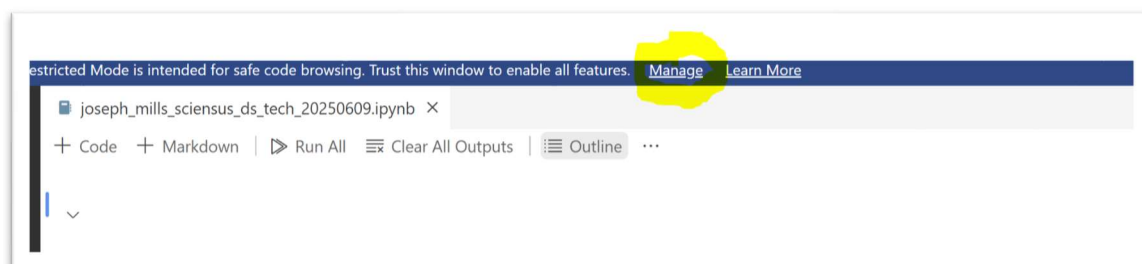
As per Jamie/Juan's guidance, no presentation/report is to be provided *at this stage* with instead the jupyter notebook containing the narrative and outputs. This document is for compatibility purposes only.

The main plots have been output below also.

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### Trusted notebook;

To ensure all markdown and plots display correctly it is important to trust the notebook. In Google Colab this should be straight forward, if viewing in VS Code this can be seen.

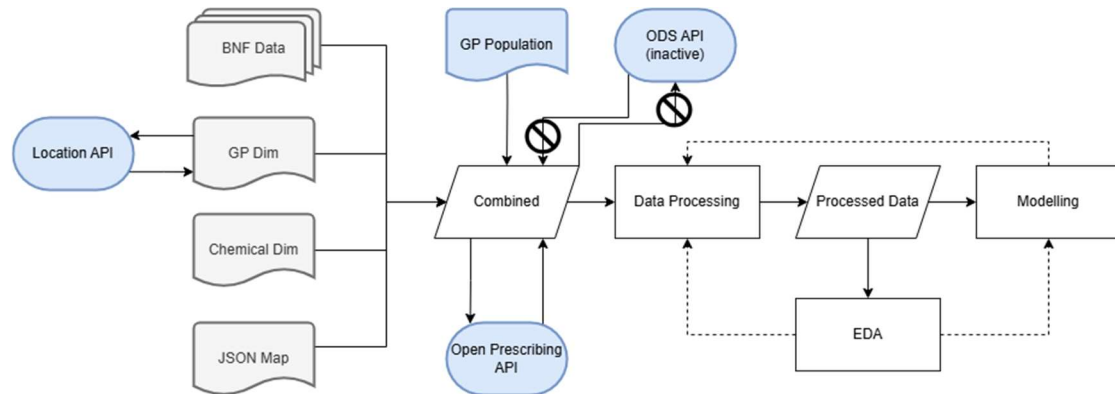


After selecting this, all markdown should appear normally.

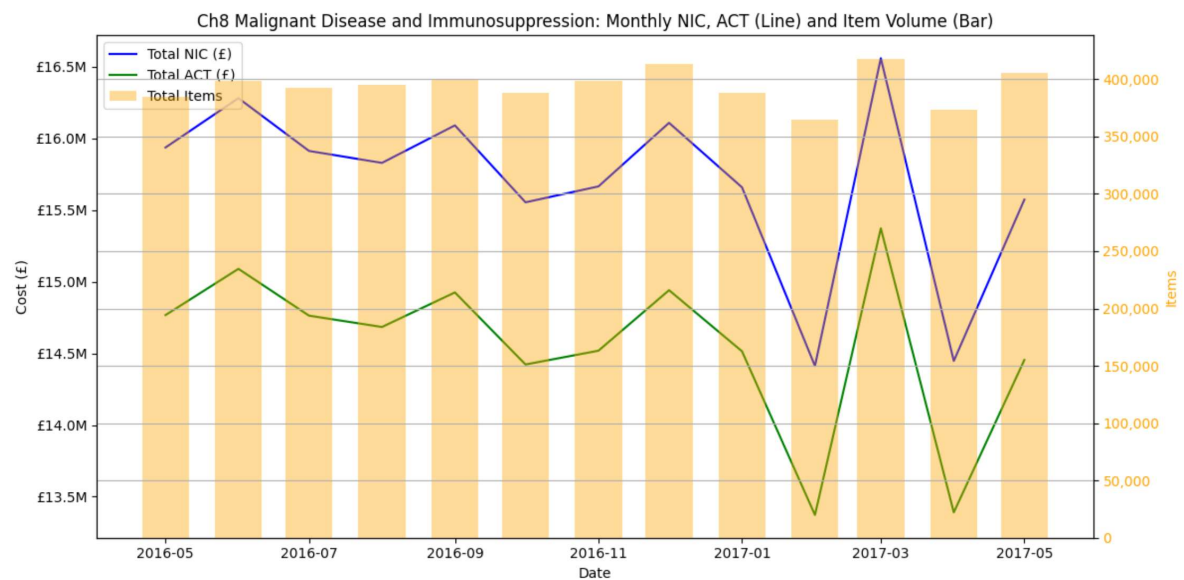
In some cases it may be necessary to click at the side of outputs 'more actions' -> 'change presentation' -> 'html' (for maps), png (for plots)

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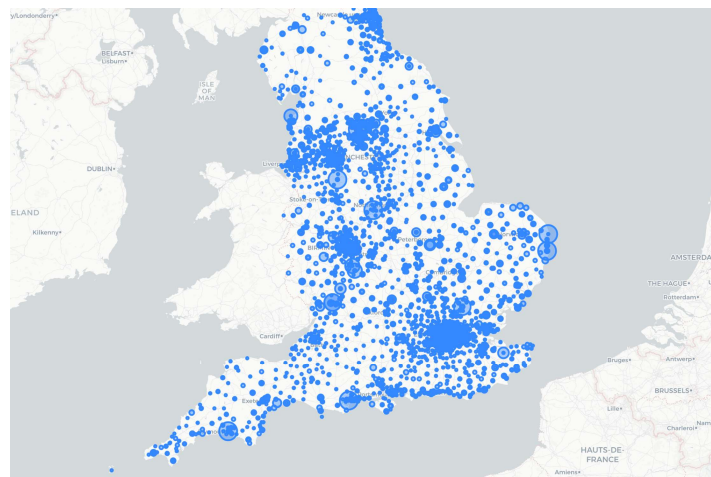
## Data Flow Diagram



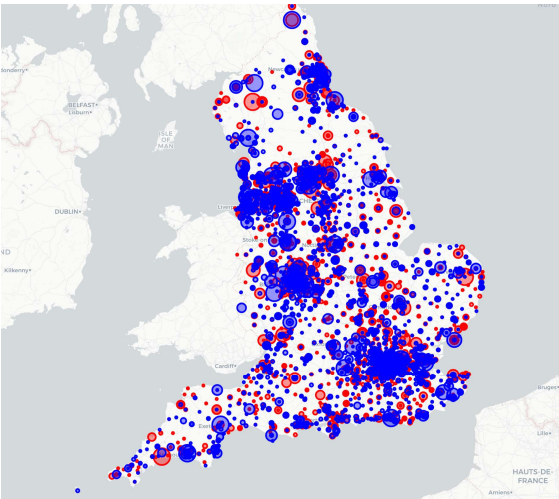
## Ch8 Monthly spend/volume



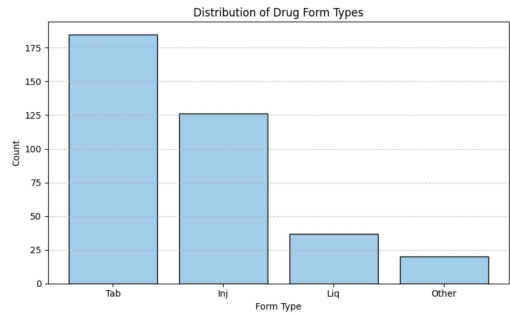
## MAP: total act cost per 1000



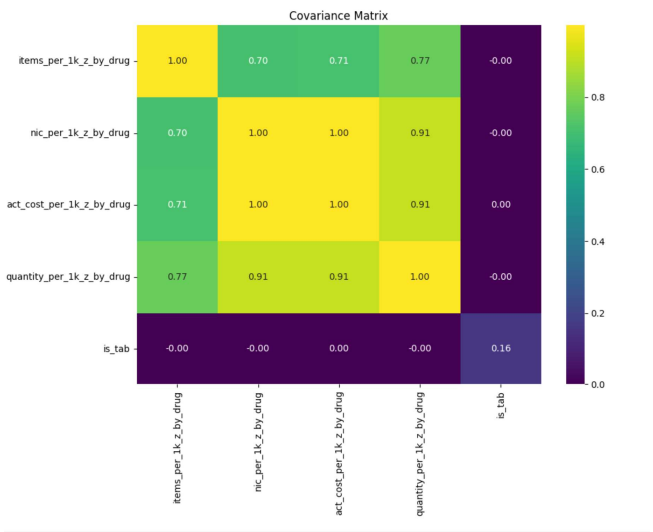
**MAP: act cost dif MAY->MAY per 1000**



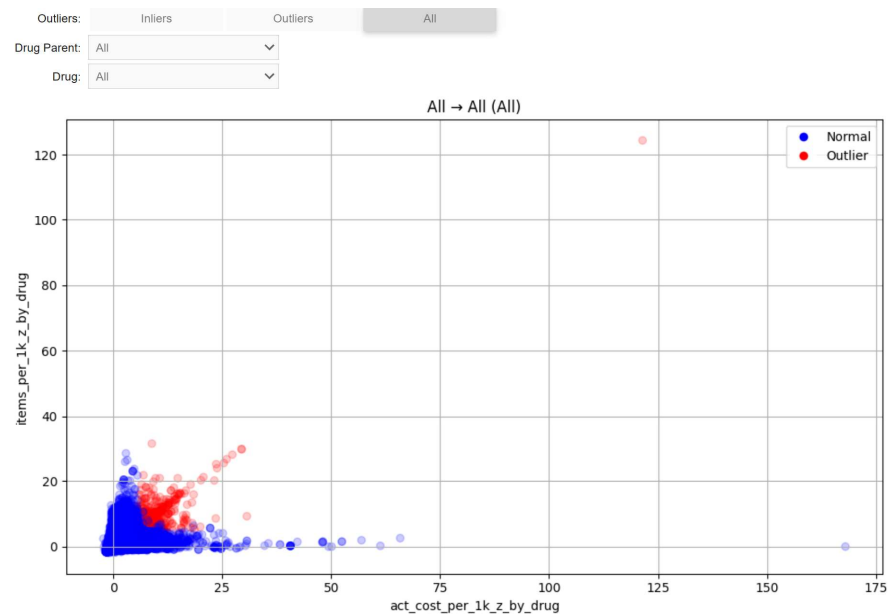
**Drug Form Types**



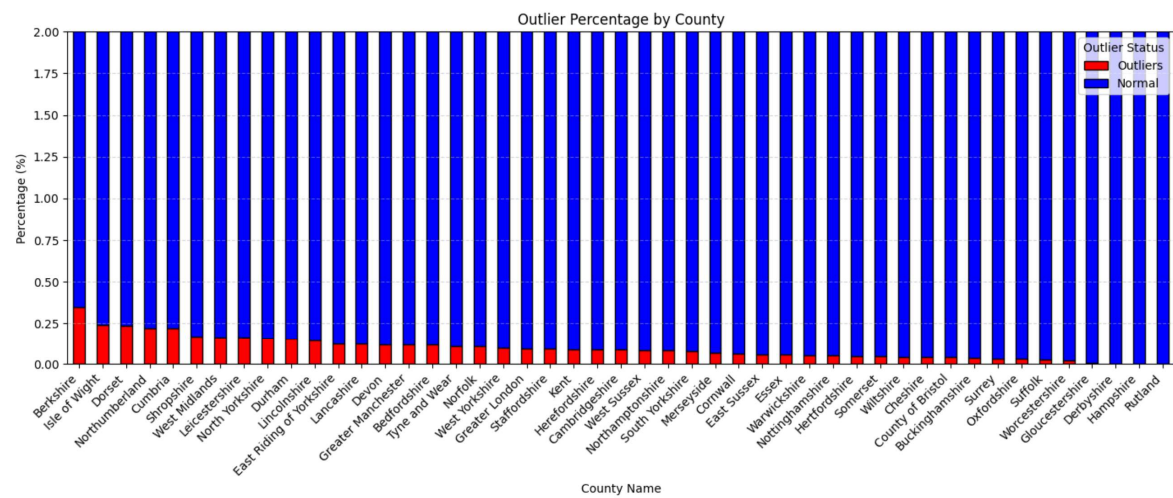
**Initial co-variance Matrix**



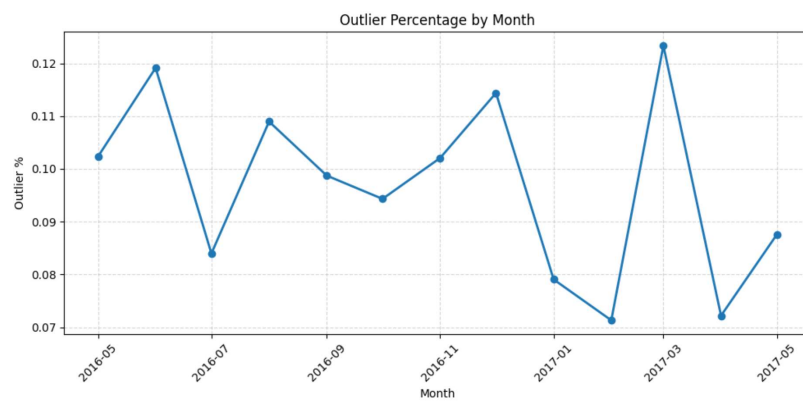
## Iso Forest Interactive model output



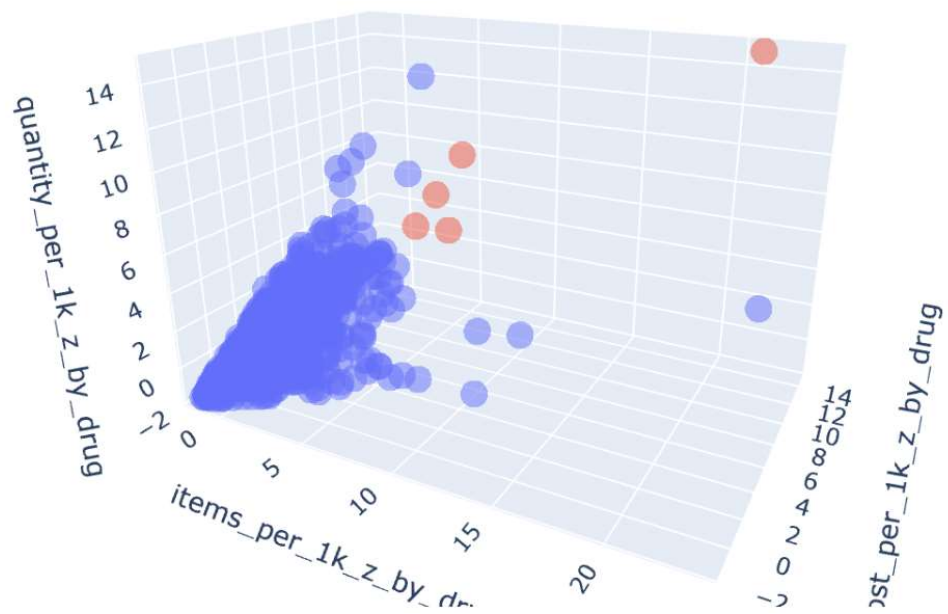
## Outlier Percentage by County



## Outlier percentage by Month



**Model inputs and output plot (Red - outlier)**



**PCA 3 Dim, 3d plot**

