Dublin Bikes Report

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1 Introduction

The two tasks chosen by our research team are:

1. To assess the impact of the pandemic on the city-bike usage;

2. To estimate how the city-bike usage would have been without the pandemic.

Station Selection: To decrease computational times we decided to focus on three bike stations. Rather than choose them arbitrarily, we used the *k-means* clustering algorithm to divide Dublin's stations into $k = 3$ clusters based on latitude and longitude, then choose the nearest station with the largest possible capacity of 40 stands to the centroid of each cluster. This ensures an unbiased selection of 3 stations representing various parts of Dublin's geography without any being on the periphery of the network.

Dublin City Bike Stations with 40 stands