# Group ID - MSc in Data Analytics

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Abstract

This research delves into a comprehensive analysis of Ireland's population estimates from 1950 to 2023, with a focus on age groups and genders. Utilizing Python, the study conducted data preprocessing, eliminating irrelevant information and addressing missing values. Visualizations of age structures across all years were created, accompanied by a flexible function for generating population pyramids. The study further explored mean age variations over time, employing machine learning to predict changes. Clustering techniques identified baby booms, and predictive models calculated populations for specific ages. Statistical analyses compared the data against normal, binomial, and Poisson distributions, offering insights into the underlying population dynamics.

Introduction

Conclusions

References