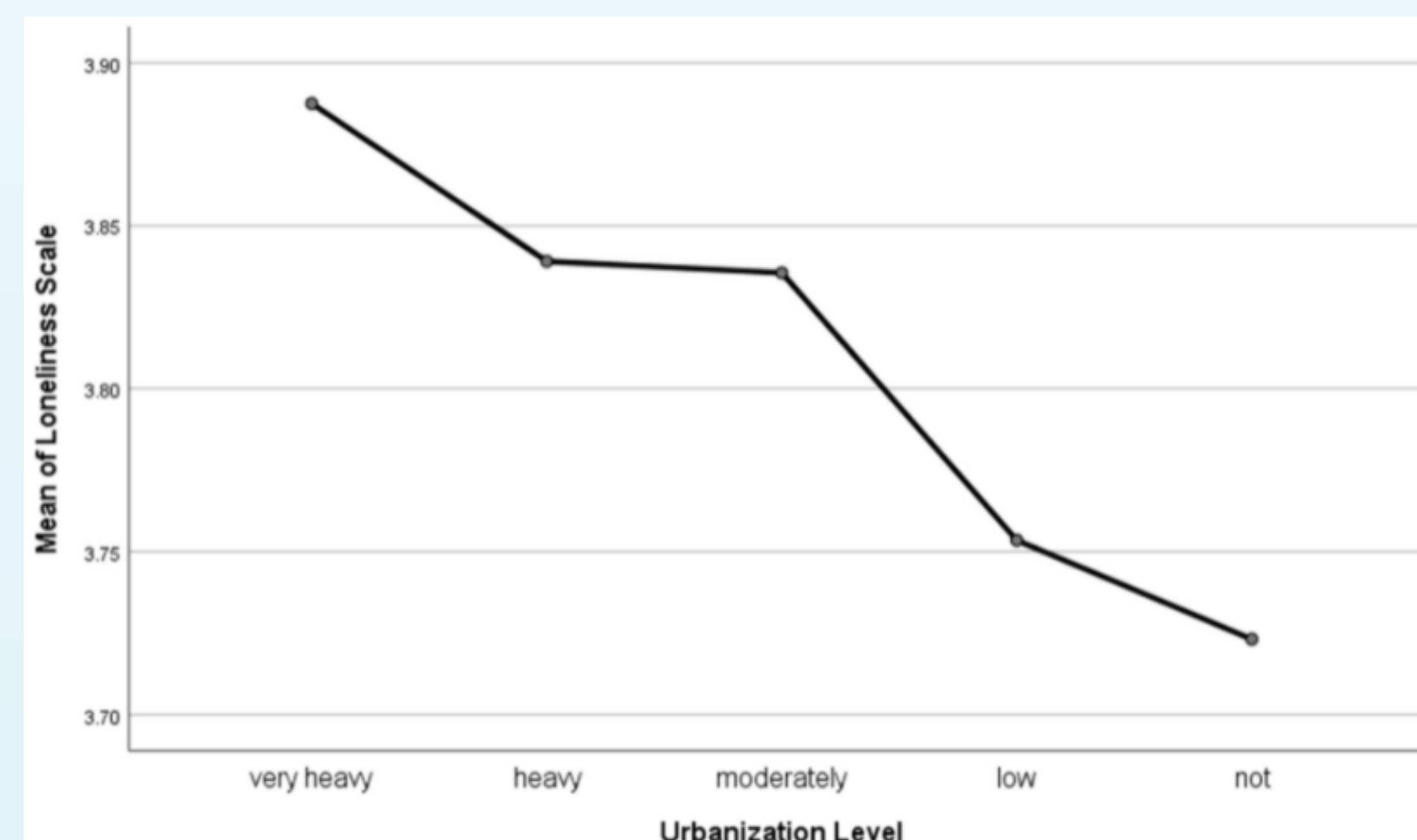


Intelligent Awareness

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Introduction

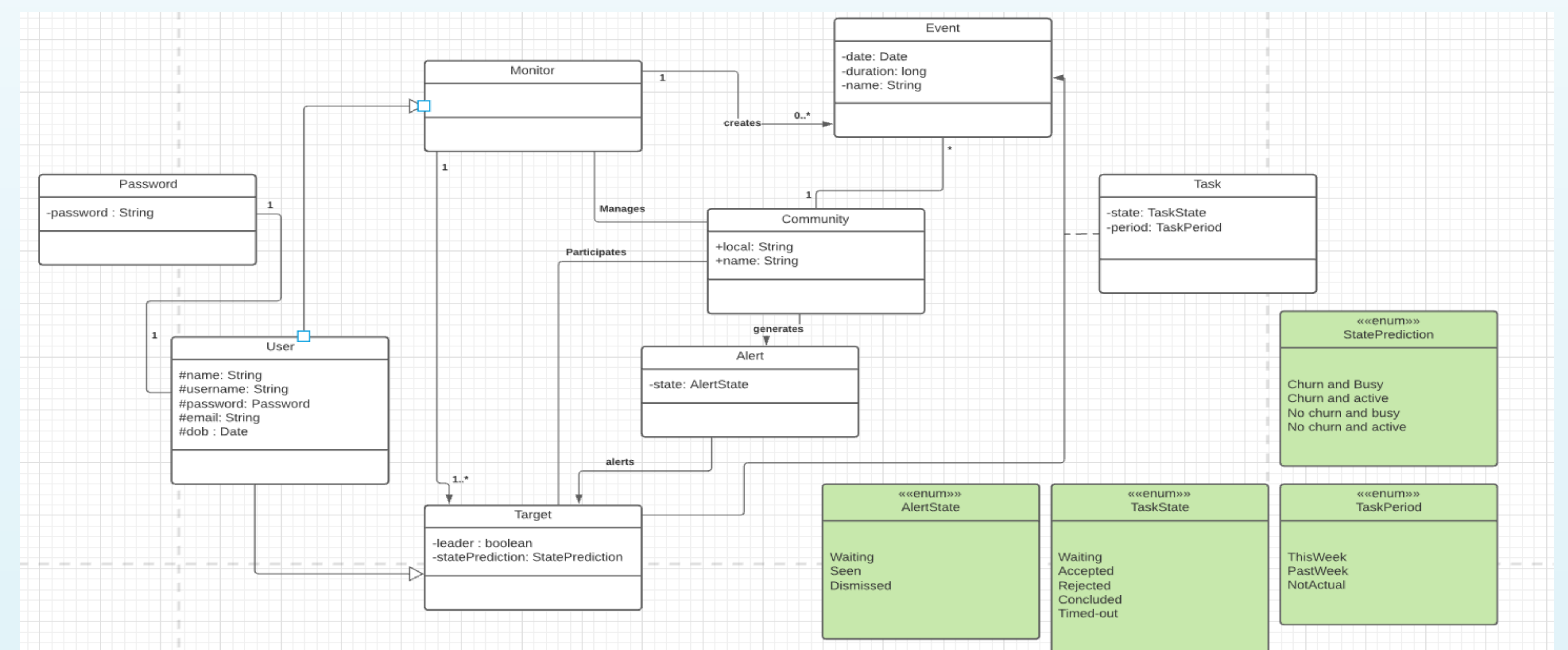
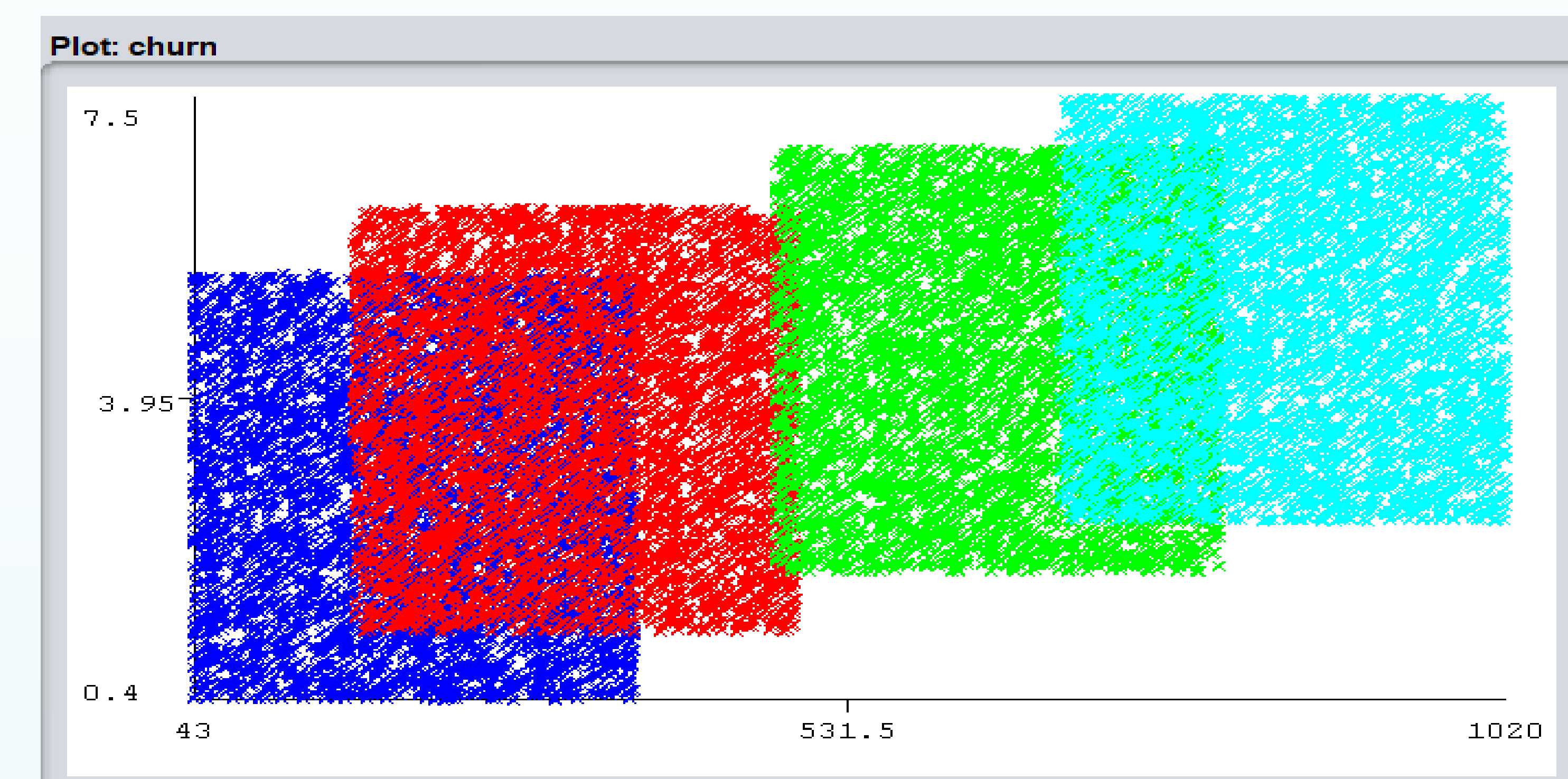
The objective of this project is to tackle a very specific but threatening problem in today's society that is unwanted loneliness, it mainly affects the quality of life of our senior citizens (65+ years old, 2,2Million in Portugal [2019 Pordata]), it affects their mental health, social interactions, emotional and even physical health. In today's age where the whole world has been affected by a major pandemic it has become more and more urgent to find ways to combat the impact it has. The social and physical isolation come with big repercussions to those that live alone. The goal is to develop an algorithm that identifies whether a specific person is already or going towards this process of unwanted loneliness by measuring that person's churn rate (metric for withdrawal) and that person's activeness. For that we will build various types of communities so everyone could be included and join a community of their preference. Inside those communities we will have a community monitor, an expert, that will assign tasks for the targets (community members) and also monitors the communities' performances according to the task's completions.



Methodology

A deep learning model is trained with a synthetic dataset, the output is a prediction on the churn and activity status of each person in a community. A community manager / monitor will have access to each community members performance during the month, letting him know which person has churn or not, and which person is actively doing the tasks given by the monitor.

For the generation, we defined a mean for each of our 9 KPIs for each of our Profiles, so each profile would have different means on each KPIs, for example a busy person with churn wouldn't have the same mean value of tasks completion as an active and not busy person. Below we can see how we store our data and on the right we can see the distribution of the classes according to one of our KPIs



Results

