Analysis and Prediction of UFO Sightings

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**Abstract**

In this study, 80,000 reports of UFO sightings across the world from 1998 to 2014 were analyzed. In addition to graphically showing a lot of curious facts about those sightings, the linear regression model was built for predicting the number of seen UFOs in the future years.

**Introduction**

The study of Unidentified Flying Objects (UFOs) presents a very fascinating and complex puzzle. The term itself merely denotes an aerial object that can’t be identified, but oftentimes causes us to think about aliens and other extraterrestrial life.

This study is aimed to find out why, when, and where people see UFOs, as well as to see how people describe one. Also, there is going to be built a simple model that will show how UFO sightings will never stop, but increase as years go by.

**Materials and Methods**

The Dataset

The dataset that was chosen is called “UFO Sightings” and is freely available on the popular data science platform – Kaggle [1]. It contains over 80,000 reports of UFO sightings over the last century.

Tools for Analysis

The main attacking weapon for this analysis is R. This is a language and environment for statistical computing and graphics. It has a lot of useful libraries that allow for easy and good-looking graphs, such as “tidyverse”, “ggplot”, “dplyr”. Also, a custom library from github was used – “wordcloud2” [2] (since the version from CRAN, package manager for R, is outdated) for building a wordcloud of what people said about UFO’s they’ve seen. Libraries for building machine learning models were also available and very easy to use in R, which made creating the model a very simple task. The code of the analysis is available on github [3].

**Results**

Based on 80,000 UFO reports we found out, that the most dominant part of the world that reports them is the Northern part of America continent.

The most reported number of UFO sightings goes to the state of California of United States of America.

The most common shape of reported UFO’s is either just a blink of light or some circle-like figure

Year that has the biggest number of reported sightings is 2012.

**Discussion**

The part of the world that has by far the most reports of UFO sightings is The United States of America, which might be influenced by the huge territories that are still not explored, as well as by media and superstitious nature of a lot of Americans and their belief in supernatural [4].

The State of California has the biggest number of UFO reports, which can be connected to the fact that there are a lot of airports, as well as military bases [5]. On top of that California has a warm climate which allows a lot of folks to spend a lot of their time outside, even at night.

The year that has seen the most UFO reports, coincidentally, is the year of 2012 phenomenon [6]. It can be argued that the more human mind is disturbed by thoughts about the supernatural, the more chance it is to see the UFO for them.

**References**

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