

# Bellabeat Case Study

By Jordyn Ohashi



# The Problem

## Company

- Bellabeat, a high-tech company that manufactures health-focused smart products including:
  - Bellabeat app
  - Leaf
  - Time
  - Spring
  - Bellabeat membership



## Context

- Since it was founded in 2013, Bellabeat has grown rapidly and quickly positioned itself as a tech-driven wellness company for women
- The company focuses on digital marketing extensively and wants to find more opportunities for growth

## Problem Statement

- Identify trends in smart device usage and how the trends can be used to guide marketing strategies

# Data

## Datasets

- [Dataset of Consumer-Based Activity Trackers](#)
  - Collected activity from participants using a Fitbit or Garmin
- [National Health and Nutrition Examination Survey](#)
  - Includes answers to questions on sleep habits and disorders
- [Fitbit Fitness Tracker Data](#)
  - Collected Fitbit data from Amazon Mechanical Turk

## Notebook

- Full analysis available on GitHub
- [Click here](#)

# Cleaning

- Searching for high level trends, so focused on daily activity data
- Not enough data collected for sleep or weight data therefore excluded
- Only include data where users used the device for an adequate amount of time, at least 150 steps

- Removed duplicate data
- Reformatted data to same data types
- Merged Fitbit dataset and Dataset of Consumer-Based Activity Trackers

# What was measured & analyzed

## Variables

- Date
- Steps
- Calories
- Minutes of activity
- Watch provider
- Number of uses per participant

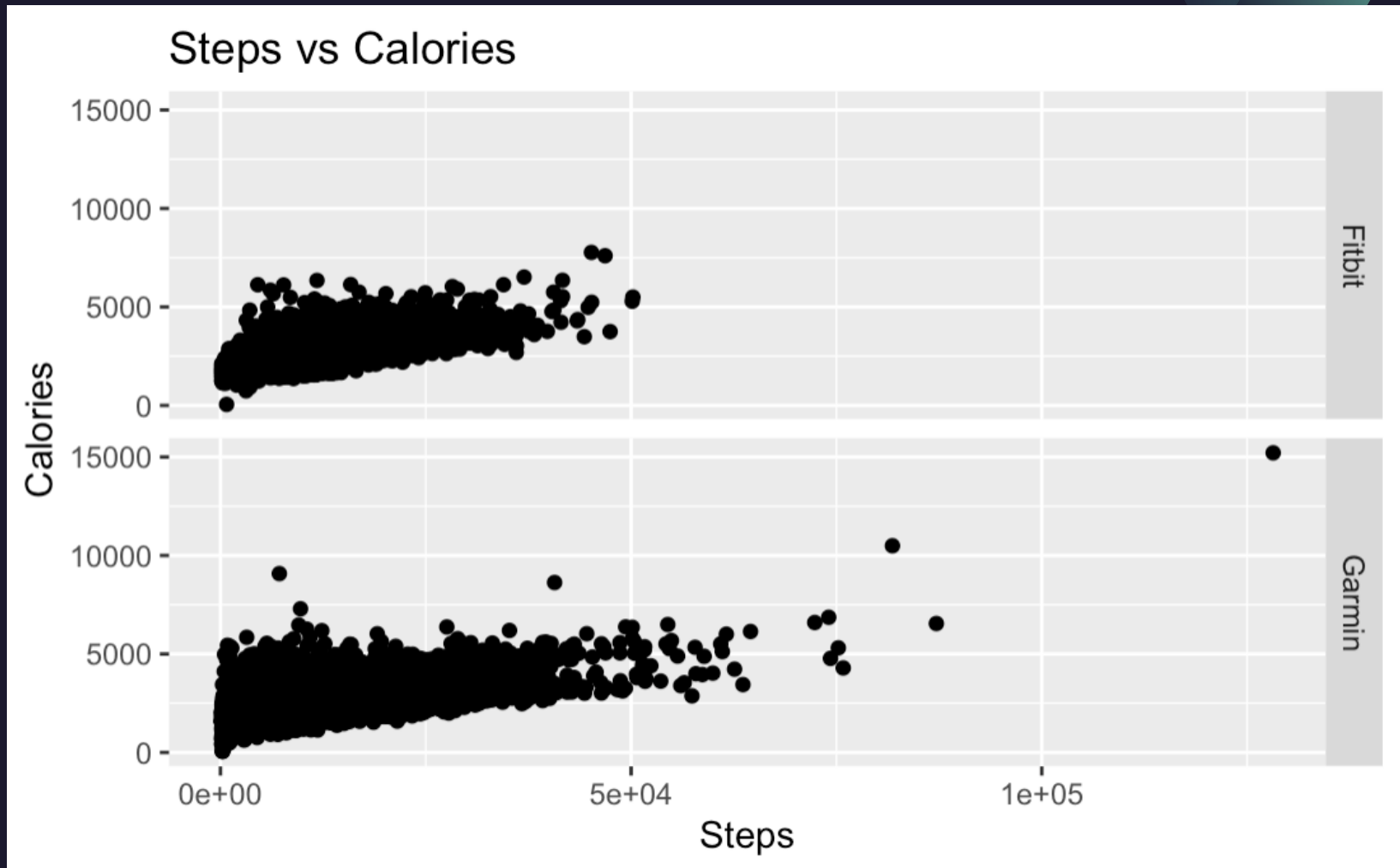
## Analyzed

- Found the averages, minimums, maximums, etc. for the variables
- Analyzed the distributions of the variables
- Compared variables looking for correlations
- Analyzed the spread of the tracking data over time

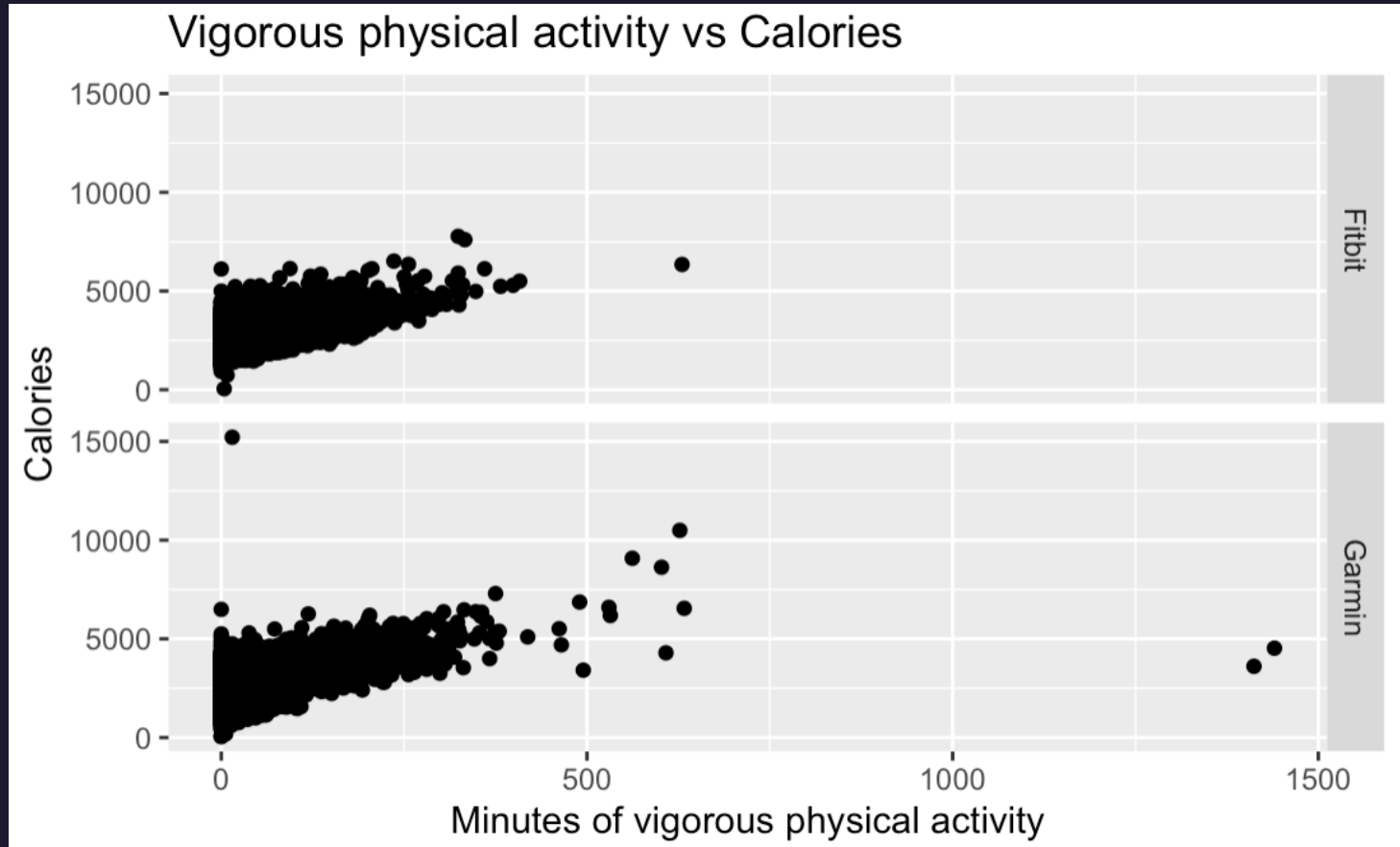


# Results

- Positive correlation
- Garmin
  - $r(41768) = 0.544, p < 2.2e-16$
- Fitbit
  - $r(25355) = 0.540, p < 2.2e-16$



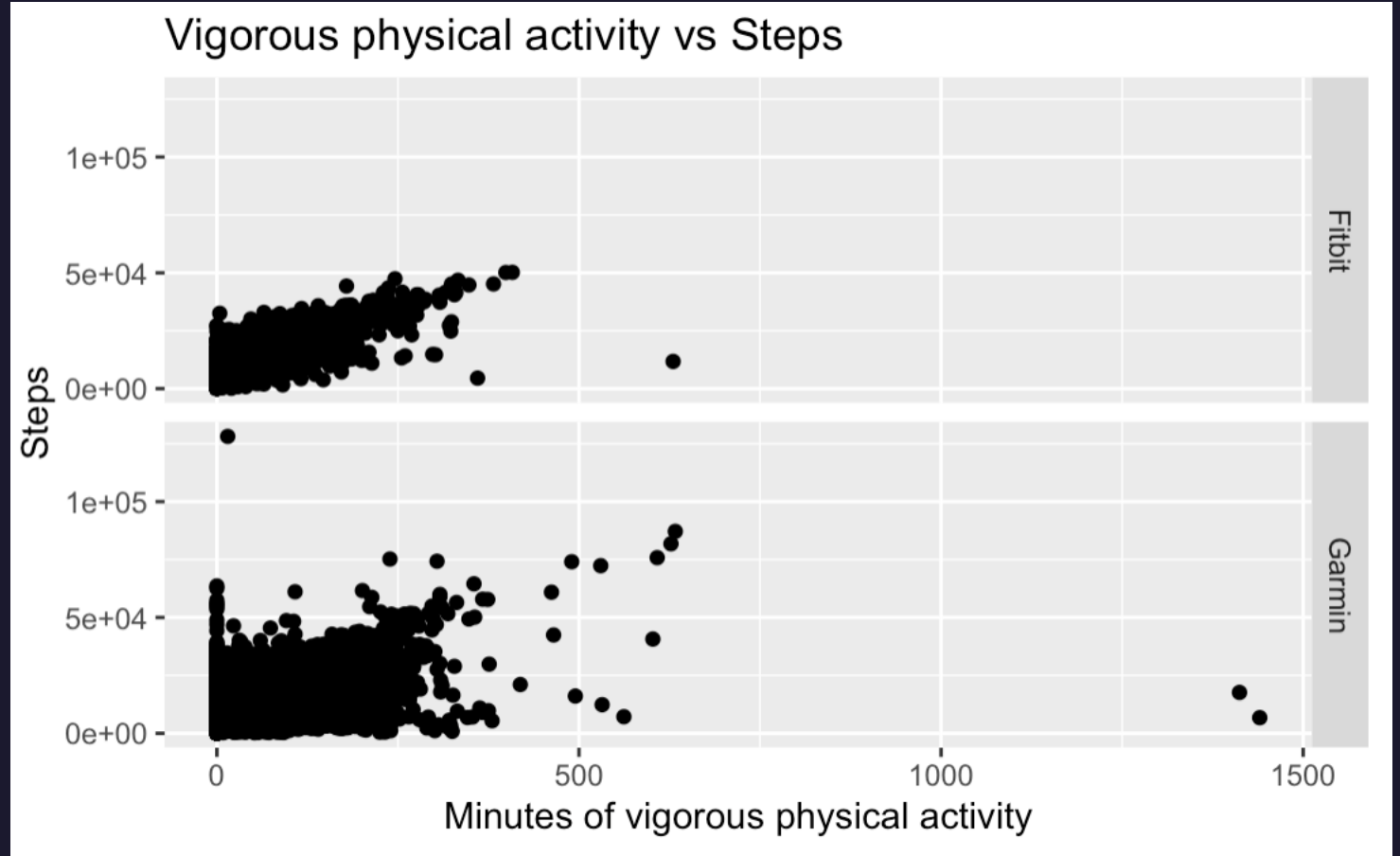
# Results



- Positive correlation
- Garmin
  - $r(41768) = 0.613, p < 2.2e-16$
- Fitbit
  - $r(25355) = 0.517, p < 2.2e-16$

# Results

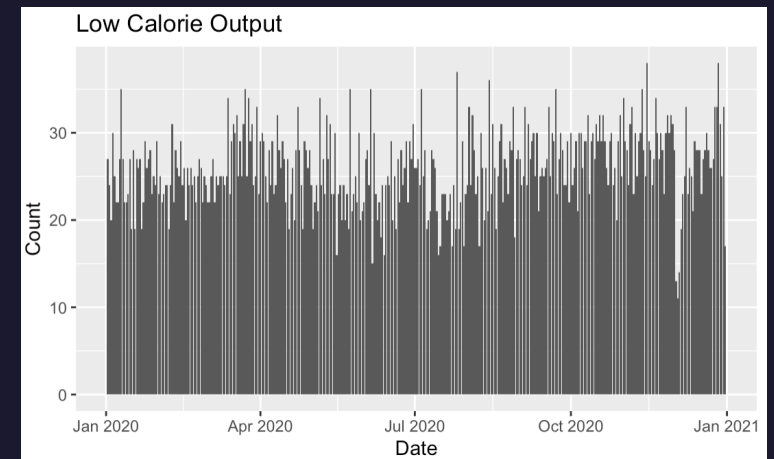
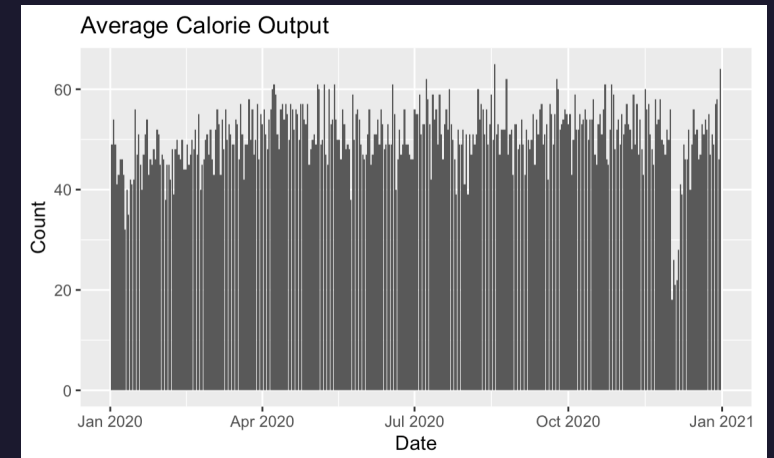
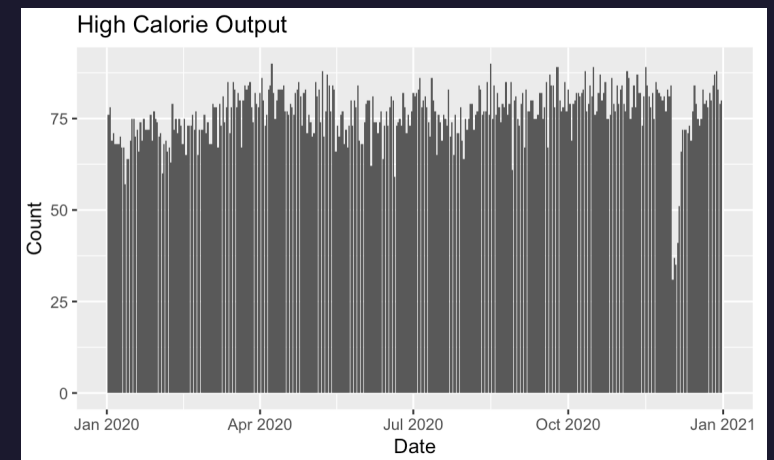
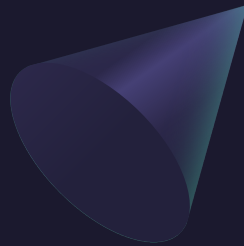
- Positive correlation
- Garmin
  - $r(41768) = 0.568, p < 2.2e-16$
- Fitbit
  - $r(25355) = 0.779, p < 2.2e-16$





# Results

- People with a lower calorie output have a lower consistency
- People with an average calorie output are more consistent exercising
- People with a high calorie output have high consistency and frequency



# Audience

- Bellabeat focuses on helping women take charge of their health and fitness
- From a survey fitness bands are more popular than smartwatches among women
- The COVID-19 pandemic boosted the market as consumers were forced to spend more time at home, find new ways of exercising due to limited gym access, and sometimes monitor their medical health
- Moreover, women are the main target for Bellabeat, and fitness bands are more popular among them so there should be an increase of focus on their leaf product



# Strategy

- Based on data from tracking devices, digital marketing should be focused on how women can increase their health by consistently working out using the Leaf product
- The more people tracked their fitness the more consistent and frequently they exercised
- Higher level activity leads to more calories burned so marketing should portray how the Leaf encourages high level activity with daily goals

