Chart

Description automatically generated**Measuring the NET Promoter Score (NPS)**

|  |  |
| --- | --- |
| Net promoter score |  |
| Unhappy costumers |  |
| Happy costumers |  |

Diagram

Description automatically generated**From Data Sources towards Insights**

|  |  |
| --- | --- |
| Information pipeline |  |
| Research questions |  |
| Extraction (from source data to event logs) |  |
| Data preprocessing |  |
| Mining techniques to discover patterns |  |
| Improvement through feedback and new ideas |  |

**Peri Net Example**

Diagram, schematic

Description automatically generated

A picture containing chart

Description automatically generated**From Data to Process Mining**

|  |  |
| --- | --- |
| Data sources |  |
| Extract |  |
| Event logs |  |
| Process mining |  |
| Process discovery |  |
| Compliance checking |  |
| Improvements |  |

Diagram

Description automatically generated**Numerical Representation of Textual Data Workflow**

|  |  |
| --- | --- |
| From text to numbers |  |
| Cleaning text |  |
| Tokenization |  |
| Building vocabulary |  |
| Vector representation |  |
| Stemming, lemmatization, and removing stopwords and punctuation |  |

Graphical user interface, text

Description automatically generated**CountVectorizer Implementation**

Chart

Description automatically generated**Singular Value Decompostion**

Diagram

Description automatically generated**Document Topic Generation**

|  |  |
| --- | --- |
| 5th sentence |  |
| Topic A |  |
| Topic B |  |
| Laptop |  |
| Cell phone |  |
| Computer |  |
| Banana |  |
| Orange |  |
| Apple |  |
| Juice |  |
| Drinking |  |

Diagram

Description automatically generated**Latent Dirichlet Allocation Algorithm**

|  |  |
| --- | --- |
| Choose k topics |  |
| Control each document, each word is assigned randomly to a topic |  |
| For each word in each document, compute |  |
| Update the topic for the word according to |  |
| Number of iterations complete |  |
| Model |  |

Graphical user interface, application, table

Description automatically generated**Screenshot of Visitors by Country**

|  |  |
| --- | --- |
| Country |  |
| Acquisition |  |
| Users |  |
| New |  |
| Sessions |  |

**Screenshot of Time Spent on Website**

Graphical user interface, application, table

Description automatically generated

**Screenshot of Bounce Rate Value**

Graphical user interface, application, Word

Description automatically generated

|  |  |
| --- | --- |
| Pageviews |  |
| Unique |  |
| Avg. Time on Page |  |
| Bounce Rate |  |
| Exit |  |

**Screenshot of Engagement per Sessions**

Table

Description automatically generated

|  |  |
| --- | --- |
| Sessions |  |
| Pageviews |  |
| Session Duration Bucket |  |
| seconds |  |

Graphical user interface, application

Description automatically generated

X

Chart, line chart

Description automatically generated**Traffic from Different Searches**

**Active Users of Social Media in 2021**

Chart, bar chart

Description automatically generated

Diagram

Description automatically generated**Social Media Mining**

|  |  |
| --- | --- |
| User |  |
| Application |  |
| Social media platform |  |
| Download |  |
| Data |  |
| Cleaning and pre-processing |  |
| Cleaned |  |
| Analysis |  |
| Results |  |
| Visualization and reports |  |
| Data analyst |  |

Graphical user interface, application, table

Description automatically generated**Interacting with the Twitter API**

|  |  |
| --- | --- |
| Rest API |  |
| Published tweets |  |
| Streaming API |  |
| Future |  |
| Now |  |
| Time |  |

Graphical user interface, text, application

Description automatically generated**Screenshot of Twitter´s Configuration Page**

|  |  |
| --- | --- |
| Keys and tokens |  |
| Keys, secret and access tokens management |  |
| Regenerate |  |
| Consumer API keys |  |
| We only show your access token and secret when you first generate it in order to make your account more secure. You can revoke or regenerate them at any time, which will invalidate your existing tokens. |  |
| Access Level: Read, write, and Direct Messages |  |

Chart

Description automatically generated**Twitter Text Analytics: Term Frequencies**

|  |  |
| --- | --- |
| Frequency |  |

Graphical user interface, application

Description automatically generated**Screenshot of Facebook for Developers**

Graphical user interface, application

Description automatically generated**Screenshot of Facebool Graph Explorer**

|  |  |
| --- | --- |
| Access Token |  |
| Generate |  |
| Example |  |
| User or Page |  |
| Permissions |  |
| Public\_profile |  |
| Add a |  |

Graphical user interface, application

Description automatically generated**Screenshot of Graph Explorer Query Field**

|  |  |
| --- | --- |
| Graph API Explorer |  |
| Get |  |
| Me?fields=id,name |  |

Diagram

Description automatically generated**A/B Testing Logic**

|  |  |
| --- | --- |
| Traffic |  |
| Version A |  |
| Version B |  |
| A/B testing |  |

Graphical user interface, application, website

Description automatically generated**A/B Testing example**

|  |  |
| --- | --- |
| Discover Wikipedia |  |
| Learn more |  |
| Click rate |  |

Diagram

Description automatically generated**Multivariate Testing Example**

|  |  |
| --- | --- |
| Multivariate Testing |  |
| Headline |  |
| Button |  |
| Percent conversion |  |
| Winner |  |

**A/B Testing versus Multi-Armed Bandit Testing**

Graphical user interface, chart, funnel chart

Description automatically generated

|  |  |
| --- | --- |
| A/B testing |  |
| Multi-armed bandit testing |  |
| Traffic |  |
| Time |  |
| Version B (rare conversion) |  |
| Version A (frequent conversion) |  |

Diagram

Description automatically generated**the Epsilon-Greedy Algorithm**

|  |  |
| --- | --- |
| Start |  |
| Best image |  |
| Exploit |  |
| Test |  |
| Image |  |
| Explore |  |